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GLEANINGS
IN
BEE CULTURE

VOL. X[illegible] 93

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J. E. Pond
vol. 240

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Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany......................—
Bee Entomology..................—
Blasted Hopes................ 42
Editorials 47
Forgettery......................—
Heads of Grain.............. 30
Honey Column................. 4
Humbugs and Swindles .....—
Ladies' Department 27
Notes and Queries........... 41
Obituary..........................—
Remindery 48
Smilery...........................—
"Square List" ....—
The Growlery...................—
Tobacco Column............ 47

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Abutilon..........................31
Albinos 11
Bees, Learning to Keep......11
Bees visiting several Blossoms at one trip 12
Bees, Non-swarming. 30
Bees, Large......................32
Bees, Hiving.................... 40
Bee-keeping alone for business 42
Bee-man in trouble 36
Bee-keeping for Women..... 7
Bee culture, Dark side of....35
Blacks v. Italians..........13, 42
Button-wood.....................38
Buzz-saws...... 34
Cellars............................28
Cells where wanted..........16
Cells, Artificial.................16
Clamp for Bees.............. 5
Comb Honey.......... 17
Combs, Moldy............. ...38
Criticisms.........................19
Cushions, Chaff.................33
Cyprians Ahead................42
Cyps. v. Holy-Lands..........18
Doolittle's Vicinity 20
Drones from Wkr. Eggs.....18
Dysentery................. .38, 41
Egg, Moving to Drone-cell...34
Fdn., The Best...................39
Fireweed 14
Foster's Report..................26
Frames, Coverings for.... ..17
Frames, Wiring on Hooks...31
Frames, Wide, To Remove. 40
"Friend"..........................37
Fruit-trees.........................36
Gladiolus. 28
Goldenrod. 42
Hatching Queens in less than 16 days..............21, 27, 31
Heddon's Apiary 16
Hive, A Wintering.............34
Honey, Selling Extracted....29
Honey, Marketing.............20
Honey-houses... 7, 22, 24, 25, 26
Honey-plants by Road.......40
Honey-plants 14
Honey-dew........................32
Horsemint 40
Horse-chestnut..................12
Hybrids Ahead...................38
Journals, To Bind..............21
Labels, To Fasten 36
Melilot 11
Nebraska 30
Odor of Bees.....................38
Oregon.........................13, 31
Platforms, Beveling...........39
Porter's Troubles...............37
Pounds of Bees in a Colony..28
Queen-cells, To Get...........12
Queens, Dollar...............6, 32
Queens, Several in Hive......12
Queen that came home 25
Quilts.............. 17
Rats and Mice...................41
Rape.................................33
Raising Queens, etc...........16
Sections, 1 lb....................17
Sections, ½-lb...............10, 39
Sections, Labeling.............48
Separators.........................17
Sex of Ova.........................15
Shirts for Bees 19
Silverhull...........................42
Smoke for Stings...............11
Statistics..................26, 33, 41
Stringer's Report 39
Swarming at Night........30, 42
Swarming, To Stop............39
Virginia Creeper...............31
Wheat for Honey..........9, 39
Windmills 34
Zinc to Exclude Queens..10, 35

BEE-KEEPERS,

ATTENTION !!

200 COLONIES OF BEES FOR SALE.

All interested in advanced bee culture, who want to make bee-keeping **pay**, should send for price list of Apiarian Supplies, Bees, Queens, etc., to

E. T. FLANAGAN,
Box 819, Belleville, St. Clair Co., Illinois.
Proprietor of Rose Hill, Cahokia, Falling Springs, and Lake Apiaries.—Beeswax wanted. 1-12d

FOR SALE!

50 STRONG COLONIES, Italian and hybrid bees, in two-story Simplicity hives. STACY PETTIT,
1-3d Ft. Smith, Sebastian Co., Ark.

E. T. LEWIS & CO., TOLEDO, OHIO, Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

IMPORTED QUEENS.

In April, - - - - - -	11	francs	in	Gold.
May and June, - - - - -	10	"	"	"
July and August, - - -	9	"	"	"
September and August, - -	7	"	"	"

No orders received for less than 8 queens. Queens which die in transit will be replaced only if sent back in a letter. 1-6d
CHARLES BIANCONCINI & CO., Bologna, Italy.

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QUEENS AND NUCLEI IN SEASON.
3tfd Circular on application.

J. H. ROBERTSON, PEWAMO, IONIA CO., MICH.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 10tf
*Paul L. Viallon, Bayou Goula, La. 1tfd
*S. F. Newman, Norwalk, Huron Co., O. 1tfd
*Wm. Ballantine, Sago, Musk. Co., O. 1tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2
*Jas. A. Nelson, box 83, Wyandott, Wy. Co., Kan. 5-5

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 1tfd
S. F. Newman, Norwalk, Huron Co., O. 1tfd
F. A. Snell, Milledgeville, Carroll Co., Ill. 3-2
M. S. West, Flint, Gen. Co., Mich. 1-6

1883- -1883

ITALIAN QUEENS.

I am now booking orders for queens. I cull my queens as they hatch, is the reason my customers were so well pleased last year. Send me your address on postal, and get circular. Six for $5.00. **J. T. WILSON,**
1tfd Mortonsville, Woodford Co., Ky.

THE MOST PERFECT AND HANDY

COMB-HONEY ARRANGEMENT

EVER INVENTED.

For **$1.00** I will send you my New Clamp, filled with the most perfect sections in the world. My circular will be ready in January. Send a one-cent stamp for one.

Mr. J. H. Warner, of Central Bridge, Scho. Co., N. Y., writes me as follows: "Mr. F. Boomhower: To work with your clamp is simply a pleasure."

Address **F. BOOMHOWER,**
1d Gallupville, Schoharie Co., N. Y.

50 TO 150 COLONIES OF

PURE ITALIAN BEES,

In new, superior, well-painted, movable-frame hives (frames 12¼x12¼ in.), for sale at $6.00 per colony, delivered at depot or express office at Lexington, LaFayette Co., Mo. DR. G. W. YOUNG.
12-2d

LOOK! A neat stencil plate, ink and brush for 35 cts. Three to one address for $1 00 postpaid. Address JOHN COULSON,
1-3d East Rochester, Col. Co., Ohio.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CLEVELAND.—*Honey.*— Honey has been a little dull the past two weeks, and prices about 1c. lower. But white, in 1-lb. sections, selling 20 to 21, and 19 to 20 for 2 lbs. Second quality about 2c. less. Extracted is very dull, scarcely any selling, holding at 10 to 11 in bbls., and 12 to 15 in cans and pails. *Beeswax* very scarce, 28@30. A. C. KENDEL.
Cleveland, O., Dec. 21, 1882.

DETROIT.—*Honey.*—The supply of comb honey is just about equal to the demand. It is bringing from 18@20 cts. for a good article, and from 15@16 cts. for dark; the latter sells but slowly. *Beeswax* is worth 25@30 cts. A. B. WEED.
Detroit, Mich., Dec. 26, 1882.

CINCINNATI.—*Honey.*—The demand is good for extracted honey in barrels, as well as in glass jars and tin buckets. Arrivals fair. The demand is fair for comb honey, which is not cheap enough to make trade lively. Extracted honey brings 7@ 0c on arrival; comb honey, 14@20c. CHAS. F. MUTH.
Cincinnati, O., Dec. 21, 1882.

CHICAGO.—*Honey.*—Prices are unchanged, but the supply is more than equal to the demand. *Beeswax* is scarce, and rules at 27c for bright yellow, cash on arrival; dark and off color, 17@22c.
ALFRED H. NEWMAN.
923 West Madison St., Chicago, Ill., Dec. 21, 1882.

I have some pure linn honey for sale, in 30 and 60 lb. tin cans. J. B. MURRAY.
Ada, Hardin Co., O., Dec. 17, 1882.

I have 1400 lbs. white extracted honey to sell, at 10 cts. per lb., packages included. ROBT. QUINN.
Shellsburg, Benton Co., Iowa, Dec. 1, 1882.

I will pay 10 cts. per lb. for white clover or linden honey, in barrels or half-barrels, or 8 to 8¼ for good buckwheat. Send samples before shipping.
I. M. KAUFFMAN.
Huntingdon, Pa., Box 290, Dec. 21, 1882.

I have 5000 lbs. of extracted honey, which I will sell at 9 cts., delivered at Cincinnati or St. Louis. Sample sent if required. Barrels thrown in.
P. L. VIALLON.
Bayou Goula, La., Dec. 17, 1882.
[Friend V., if this honey is as good as friend Blanton's, it ought to go quick at the above figures.]

I have 1000 lbs. in 1¼-lb. boxes to sell, put up in crates of 16 boxes each; outside boxes glassed, remainder not glassed. Delivered on board the cars at Decatur, Van Buren Co., Mich., at 18c per lb.
S. H. MALLORY.

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To send a postal card for our illustrated catalogue of

APIARIAN SUPPLIES

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AT THE LOWEST PRICES.

Italian Queens and Bees.

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1-6d Hartford, Washington Co., Wis.

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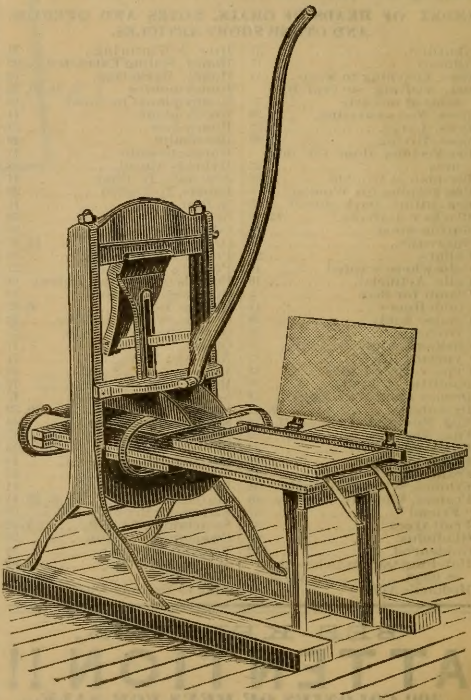

The improvements in this Press give it a superiority, both for thin and wired foundation. Circular and samples free. Address

D. S. GIVEN & C.,
1d **Hoopeston, Vermillion Co., Ill.**

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian supplies. Send for circular. 1tfd

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FOR SALE CHEAP

One Barnes foot-power circular saw, with scroll-saw attachment, including rip, cross-cut, and dovetailing saw, with 24 saw-blades. Is in perfect condition; has never been used one hour. Manufacturers' price, $40.00. Will take $30.00.
Will pay 30c for clean pure yellow beeswax delivered at this station. **EZRA BAER,**
1d Sterling, Whitesides Co., Ill.

I WANT TO BUY 100 nuclei (Lang. frame). Address, giving all the particulars,
1d F. A. SALISBURY, Geddes, Onondaga Co., N. Y.

FOR SALE!

A farm of 120 acres cheap; also 70 hives of bees, with or without. For particulars, address
1 C. C. HOLMES, Sauk Rapids, Benton Co., Minn.

BASSWOODS AT $1.75 PER 100.

By freight or express; all to be one foot or more.
Address HENRY WIRTH,
1-3d Borodino, Onondaga Co., N. Y.

MASSACHUSETTS AGRICULTURAL COLLEGE.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES, HONEY & HOME INTERESTS.

Vol. XI. **JAN. 1, 1883.** **No. 1.**

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POST-OFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

NO. 38.

HOW 3 COLONIES WERE INCREASED TO 30.

A CORRESPONDENT wishes me to tell *how* I increased 3 colonies to 30. The plan pursued was simply this: As soon as the three colonies were strong in numbers, and the combs full of brood, enough combs with the adhering bees were obtained by taking 3 or 4 from each of the three colonies, to fill a hive. Although taken from different colonies, the bees never quarreled; and after the newly formed colony had remained queenless a day or two, it was given a queen. As soon as the colonies were strong enough, another colony was made in the same manner, and this course was followed the season through, or, rather, until lack of hives put an end to the experiment. As often as a sufficient number of frames of brood could be spared from any of the hives, then a new colony was formed and given a queen. The vacancies caused in the old colonies, by taking frames to form new ones, were always filled with frames of empty comb or fdn. My greatest objection to the above method of increase is, that considerable time must be spent in finding queens before removing frames of brood, when making up new colonies.

A CLAMP FOR WINTERING BEES.

Nov. 18.—I buried 32 colonies in one clamp. The arrangement was as follows: Upon a dry sandy knoll was dug a pit 7 feet wide, 15 long, and about 4 feet deep. The walls were given a slant of about 45°. In order that no water should ever stand in the pit, a two-inch tile drain was laid from its lowest part. Fence-posts were placed, one foot apart, crosswise of the pit, their ends being imbedded in the sides of the pit until their upper sides were about 18 inches below the surface level. The space underneath the fence-posts was filled with straw, then the hives were placed in a double row, upon the posts. Each row of hives contained 8 hives, making 16 hives in the first two rows, then upon the top of these two rows were placed two more rows of hives. Each of these two upper rows contained 7 hives of a smaller pattern than those in the lower rows. Two of the hives contained two colonies each. Straw was thrown over the hives until a pyramidal-shaped pile was formed, then fence-posts were placed in an upright position, about 8 inches apart, all around the mound of straw inclosing the hives. The lower ends of the posts rested upon the earth; their upper ends leaning against the upper rows of hives. Over the fence-posts was placed another coating of straw about one foot thick, and over this was thrown a covering of earth about 18 inches thick. There were no openings for ventilation.

MEETING PROF. A. J. COOK.

Nov. 25, or thereabouts, I received a card that read something as follows: "Shall be in Flint Dec. 4th and 5th, attending the State Horticultural meeting, and should be glad to meet you there. Ever yours, A. J. Cook." Of course, I was on hand; but friend C. did not arrive until the evening of the 4th, and I had no opportunity of speaking to him until after I had listened to that interesting lecture of his upon the subject of Evolution. As soon as possible after he had ceased speaking, I pressed forward and grasped his hand; and if ever I received a hearty hand-shake it was from kind-hearted, whole-souled, enthusiastic Prof. Cook. But others gathered around, and they kept gathering around; not only that evening, but the next day; and it was not until friend C. and myself took the train Wednesday morning, and were on our way to Kalamazoo to attend the convention, that we really had an opportunity for a good, long, friendly chat. What did we talk about, do you ask? Oh! lots of things. About

DOLLAR QUEENS?

Yes, we talked about dollar queens, and friend C. was surprised to learn that we queen-breeders had regular customers who bought queens by the dozen year after year—the breeder, with his experience, implements, and extensive manner of conducting the business, being enabled to rear queens cheaper than they. He also admitted, that there was probably no difference in quality between the so-called dollar queens and the so-called tested ones; and, with the care given the matter by most of the breeders, he thought that the chances for dollar queens to be impurely mated were small indeed; yet, taken as a whole, he thought that the cheap-queen traffic discouraged breeders from putting forth their best efforts toward an improvement of their bees, and cited the case of friend D. A. Jones as an illustration. He said, that friend Jones had spent large sums of money in importing new strains, or varieties of bees, but had not received an adequate return, because queens of the variety that he had imported were soon offered, all over the country, at one dollar each. Now, the cheap-queen traffic did not prevent friend Jones from selling the first queens that he imported and reared at a good round price; but, of course, as soon as other breeders obtained some of the queens to breed from, they could sell queens of that variety as cheaply as they could Italians. When new and good varieties of vegetables or grain, or imported breeds of stock or poultry, are first introduced they bring very large prices; but as soon as widely disseminated, the prices fall; and with any thing that increases so rapidly as do bees, the fall in prices soon comes. I told friend Cook that I did not think the cheap-queen traffic would hinder a bee-keeper from getting good prices for queens, if he succeeded in developing a really superior strain of bees; but, at the time of our conversation, I could give him no illustration; but now, since attending the convention, I think I can give him one. Many of us know that friend Heddon has taken a new departure, and has demonstrated to his own satisfaction that a cross between the brown German bee and the dark leather-colored Italian is superior to either variety. At the convention he said that, as soon as the good qualities of this cross were made known, he was overwhelmed with orders for queens; that customers would often just roll up a five-dollar bill, send it along, and say: "Send me a queen, the best you can for the money. I don't care for color nor for the cost, but I want a queen tested for *business*." Dr. Miller also said, in private conversation, that he would willingly pay $3.00 each for queens for his whole apiary, if he could be *sure* that he would thereby get queens as good as the best that he now has. Don't you see, friend Cook, that the people are willing to pay high prices for queens, if they can be assured that they will receive the worth of their money, but that they *do* object to paying $5.00, or even $2.00, for a queen that, in all probability, is no better than one that can be bought for $1.00? Now, if I have made any misstatements in the above, or have given a different shade of meaning than he intended to convey, I beg friend Cook's pardon, and hope he will correct me.

AT THE CONVENTION.

How pleasant it was to meet, and grasp the hands, and look in the faces, and listen to the words of wisdom that fell from the lips of those whose writings I had read so many years, and whom I had so longed to see! The discussions at the convention were upon practical subjects, and right to the point; but none the less interesting and instructive was the exchange of ideas when "congenial spirits" gathered morning, noon, and evening, around well-supplied tables; collected here and there in nooks and corners, and out-of-the-way places, in little knots of two or three, or groups of half a dozen, or bed-fellows lay awake and "talked" far into the "small hours." Then there were the chats among friends at the railroad depots, while some of their numbers were waiting for a belated train. Taken all in all the convention at Kalamazoo was a very happy and profitable affair.

A VISIT TO LAPEER.

On the way home I was fortunate in having for a traveling companion Mr. R. L. Taylor, a bee-keeper of Lapeer, Mich. About 7 o'clock in the evening, when perhaps about 15 miles west of Flint, the train began to run slower and slower and slower, and finally it stopped; then it went on a little further, and stopped again. Upon looking out there could be seen, a short distance ahead, the headlight of another locomotive. We soon learned that there was a freight train ahead, a part of which was off the track, and four long hours dragged themselves along before every thing was righted and we moved on. As it was so late, friend Taylor thought that I had better go home with him, and, as I could come back to Flint the next day, and reach home just as soon as though I did not go, I accepted his invitation. I am very glad that I went with him. Had I known that there was so progressive a bee-keeper living within 20 miles of myself, I should—well, I *might* have made a nuisance of myself by visiting him too often. Friend T. has an Adams' horse-power (by the way, these horse-powers are manufactured in Kalamazoo, Mich.), which he sets up upon his barn floor and runs a buzz-saw with which he cuts up stuff for hives. He has a Given press for making fdn., and as I had never seen a machine of any kind for making fdn., I felt that the sight of that alone had paid me for my trip to Lapeer. Friend T.'s method of measuring and cutting off the wire for wiring frames is different from any thing I have seen described. He winds the wire lengthwise around a strip of board 4 or 5 inches wide, and of such a length that, when it passes over one end of it, the pieces are just the right length for wiring a frame. In order to be certain that I am understood, let me say, that, when the board is wound with wire, it might be compared to one of the little boards from which rubber cord is retailed in stores. Before cutting the wire at one end of the board, friend T. wraps a piece of paper around the board, near the end upon which the wire is to be cut, then winds a string around outside of the paper, draws it up tight, and ties it securely; thus, after the wire is cut, it remains upon the board, and one piece at a time can be drawn out when wanted. A large share, if not the whole, of friend T.'s bees are in an apartment of his cellar, and in another apartment is a furnace which insures perfect ventilation.

W. Z. HUTCHINSON.

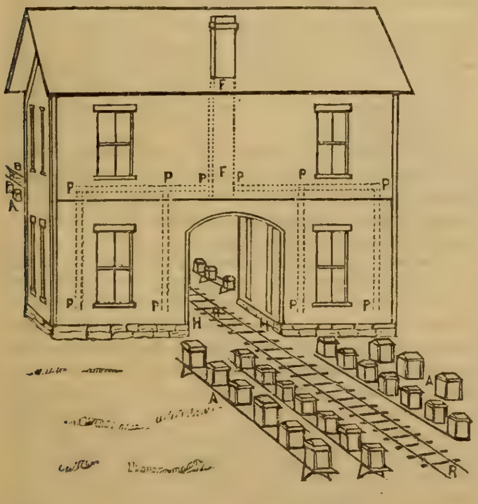
Rogersville, Genesee Co., Mich., Dec. 20, 1882.

I am very glad to find two mutual friends of mine so well pleased with each other, friend H., and I am sure you two will always be fast friends, even if you should not eventually think alike on dollar queens.—The plan you mention for getting wires of the right length for wired frames, is exactly the same we have used for more than a year past; and if I have not mentioned it in GLEANINGS, I ought to have done so. As the wires are apt to cut into the sharp ends of the thin board, we tip both ends with tin.

PLAN FOR A HONEY-HOUSE.

COMBINING, ALSO, AN IDEA FOR A RAILWAY APIARY.

THIS house is built in two sections, 12x12 feet, with a hall between, 8x12 feet. This makes the house 12x32 feet, outside. The house as sketched is a two-story one (the upper story may be left off); but as a two-story house can be built without any additional expense as to foundation, rafters, sheeting, shingles, and roof nails, it will be seen that it will pay for all extra expense, for it affords twice the room, and occupies no more ground.



PLAN FOR A HONEY-HOUSE.

A, A, apiary; R, R, railway track; H, H, hall through building; P, P, tin ventilating-pipes opening into lower rooms near the floor, and entering brick flue at F, F. A fumigating closet should be arranged at one side of the room, with a pipe running in the flue above. This pipe will require a valve, which may be opened and closed at pleasure. This closet, like the others, should correspond in width with the length of frame you use. Make wooden grates by taking three strips, same length as top-bar, and nail across sections. These grates can be slipped on the cleats on sides of closet for section-box honey.

The hall to this house runs from outside to outside, through the center of which runs a railway track 30 inches wide, made of 4x4 hard-wood scantling. This track terminates with the apiary on the back side, and at road gate on front side; over this track is transported the honey to and from the house.

A door opens at the center of each section into this hall; the one leading from the room in which the extracting is done should be of such width as to admit of barrels being rolled through. On both sides of this door are to be comb-closets. These may be made of any depth desired from 12 to 20 inches, and of such height as can be easily reached from the hall. These closets are to correspond in width with the length of the top-bar of the frame you use. Nail wooden cleats to the sides of the closet on which the combs hang; arrange in tiers one above the other. Close-fitting doors are hung to these closets, both inside and out. The inside furniture to this room should be a stand, of convenient height and length for the extractor to stand upon; racks for barrels, and counters or benches for any other honey packages you may wish to have. At extracting time the honey as brought in is hung in one closet, and the empty combs in the other. The stand upon which the extractor is fastened should be to one side of the center of the room — a low pair of trucks, or, rather, a frame, made by framing 4x4 scantling together so as to form a frame 14x24 inches; put castors under each corner of this frame, with a notch in each end-piece for the barrel to rest in, and your trucks are finished. Place a barrel upon it and run it under the extractor; when full it can be easily removed to any part of the room.

The other lower section of the house is fitted up with shelving, suitable for section-box and can honey, from 1 lb. up to 48 lb. crates, with counter and scales ready for your retail trade. The upper story, which is 12x32 feet, makes a good and safe room in which to store your empty combs, and any other fixings belonging to the apiary not needed during the cold season. The sides and ceilings of the house should be plastered, or ceiled with dry lumber, so that it is moth and bee proof. This house will be found sufficiently large to accommodate the wants of an apiary of 200 or 300 colonies. R. B. ROBBINS.

Bloomdale, O., Dec. 10, 1882.

IS IT TOO HARD WORK FOR WOMEN?

MRS. HARRISON HAS DECIDED OPINIONS IN THE MATTER.

THE woman who advocated that "bee-keeping is too hard for women," ought to be ashamed of herself. I've forgotten who she is, and haven't time to look her up. I'm heartily ashamed of her. Perhaps after all it was a man who wrote that, and signed a woman's name to it. "Too hard!" that is the cry of those who dwell in gilded palaces. "Can't work; I'm not able." Look around you, and see what other women, of no more brawn or muscle than yourself are doing. That farmer's wife, for instance, who cooks for harvesters, over a hot stove, with a teething child pulling at her skirts all day, and her breasts all night; the poor widow (Heaven pity her!) toiling by a midnight lamp, in order to have shelter, cheap tea, and a crust for herself and little ones. Is it any harder to keep bees than it is to be laced up in corsets, tilted up on high heels, with crinoline, bangs, and a bustle, and dance all night? Do you think the *stings* are any easier to bear than in bee-keeping?

Here I've been trying for years to get women to keeping bees, in lieu of making overalls at five cents a pair, and darned lace at famine prices, and you raise the hue and cry, that it is "too hard for women." I should have expected that the men, instead of women, would have raised this din, in order to keep us out of the business, for they have always preferred the soft places, such as preaching, and marrying people at five dollars a head. What would you have women do to support themselves, or even make a little spending money? Many women have a home to keep, young children, and an invalid husband to care for, and either no income or an insufficient one. What can she do easier than to keep bees? Go out to wash, or make shirts at fifty cents per dozen, eh?

We opine, that the author of that saying, "too hard for women," never earned a dollar in her life. She may have worked around home in a general way, but never was dependent upon her own exertions for a living or clothing.

Is it any harder to climb a tree, and get down a swarm of bees, than it is to gather cherries, or wash a window? to put on boxes, or take off honey, than to make bread, or wash? I'm not strong enough to carry a heavy-laden hive "up stairs, down stairs, or into my lady's chamber," and I don't do it. I let them stand where they are; if I wanted them carried around, I can make money enough at the business to hire men to do it for me — men who have not intelligence enough to keep bees either.

It is hard work, and plenty of it, to make bee-keeping a success; and what can we do, and make a success without hard work? Some people are always on the alert to get something for nothing, and are the class who get humbugged.

Peoria, Ill., Dec., 1882. MRS. L. HARRISON.

Well done, my good and tried friend. You and I agree first rate on all this; but in behalf of the imaginary culprit you have so severely taken to task, I would say that no one said, in GLEANINGS, that bee-keeping is "too hard," but a sister simply asked for your opinion in the matter; and not only has she got it, but I imagine that pretty nearly all of us now understand you.

TROUBLES WITH THE RAILROADS, AGAIN.

WHAT SHALL WE DO?

IN GLEANINGS for Nov. and Dec. you ask what ought to be done with the trunk-smasher. Let me narrate my first experiences with the railroads of this country.

Before my arrival from France at New York, 20 years ago, I had been instructed by a friend of mine to come west via Allentown, in order to avoid changing cars between New York and Pittsburgh—the change of cars, especially at night, being very difficult for a stranger unable to speak English. Accordingly, in company with a countryman who resided in New York, I hunted for the designated railroad, and visited all the railroad offices on Broadway. None of them could tell me where to find this line. All offered me their tickets. Their railroad was the shortest, the fastest, the cheapest, that I could find. At last, after several hours of search, I concluded to take a ticket via Philadelphia. On my return to the hotel, the landlord told me where the office of the desired railroad was, but it was too late, since I had paid for my ticket. This talk of veracity, unknown in Europe, where the companies don't compete with each other, is a bad show for a stranger.

I reached Philadelphia at ten on a dark and rainy night in March. The conductor of the train, who had been asked by my countryman to help me in changing cars, did not care for me, and the connecting train was gone before I had been able to find somebody to understand me. My hotel expenses amounted to two dollars. At Fort Wayne my trunk was hurled from the car, and missed the kind of ladder used for a slide, and, falling on the ground, was burst open. While I was gathering my scattered goods, and grumbling some French words of indignation, the baggage-man continued gaily his work, whistling and laughing. Yet to keep my trunk shut was, to me, a problem to solve. Fortunately a Canadian, able to understand a few French words, asked me for 25 cents, and went to a store to get a rope. When the repairing was done, the train of the Toledo, Wabash & Western was just gone; and as the next day was Sunday, my too-small pocket-book was lightened of two dollars again, for my hotel and traveling expenses.

Such circumstances, and worse than that, are of every-day occurrence. I have, as employe, a countryman who, desiring to go from Davenport, Iowa, to New Orleans, was sent to Chicago, thence to Cincinnati; and would be yet on the way had he not met a man who put him on the direct road. Last summer I saw a poor woman, with two young children, weeping for having been sent over a line which did not connect directly with the designated station. She was compelled to wait a whole night while her husband was waiting at the station, ten miles from his home.

You say that the railroads are subjected to shameful losses from the farmers, who order goods thoughtlessly and then refuse to take them from the office when charged more than they expected. Let me say a word about that:—

At several times I have noticed that, when a package goes through three lines, the intermediate line profits, by being out of reach, by increasing its rates; and sometimes to such an extent that the third line refuses to take the goods, fearing that they are not worth the exorbitant charges asked. Such was the case with the carload of fence-posts, of which I spoke in my article in your Nov. No. This carload was weighed by the Wisconsin Central; when it reached the Chicago, Burlington, & Quincy, the weight of 26,500 lbs. was increased to 36,000 lbs.; at Bushnell, the agent of the Wabash, St. Louis & Pacific refused, at first, to take it, on account of the exorbitant charges. Then, after a few days, this last railroad took it in spite of our refusal, and asked its rates on the fictitious weight, although we had proved that the posts had been twice weighed. Their answer was, that they had the right to do so.

Now, suppose that your grocer had sold you some sacks of flour and other articles, and that, when you settle with him, he charges 150 lbs. instead of 100, and increases the weight of every article in proportion. Do you not think that it would be your right, and *even your duty*, to have him fined and sent to jail, in order to stop such a brazen stealing?

But, you can not have the railroad owners sent to jail, for the railroads have no personality. They steal openly, impudently; and as their attorneys are paid by the year, they don't care for lawsuits.

If you dare to prosecute them they will try to harrass you by appealing from court to court, increasing your expenses to several times the amount in contest. Such is now their regular way of paying damages. They are as hard on the people as the kings and nobles of old.

Yet these railroad owners are public servants, for the railroads are public services, and no doubt about that, since it was on that account that they were granted the right of expropriating the owners of land, in spite of their refusal. Then we, the public, have the right to control the railroads; the right to take them in our hands, as we would take from an unfaithful servant the money and goods intrusted to him. The act could not be called an act of anger or revenge; it would be an act of justice, an act of self-protection. As to your question, "What shall we do with the baggage-smasher?" My advice is, not to go for the man who smashed your baggage, but for the corporations who tolerate such acts, and perpetuate, every day, hundreds of acts worse than that. The small employes of the railroads receive too little pay not to greatly suffer by the smallest reduction of wages. You publish a paper read by intelligent people all over the country; open a column against the abuses of the railroads, not in the spirit of anger, but for the sake of justice. You will find your reward in the satisfaction of having helped a good cause. CHAS. DADANT.

Hamilton, Ill., Dec. 8, 1882.

I know, friend Dadant, that things are bad; but I can not but think that you dwell on the worst side of the matter. Our business with railroads has been large, and extends over almost all the lines in the world. We, of course, now and then have grounds for complaint; but when we do so we state the matter pleasantly; and it gives me pleasure to say, that every claim we have ever sent in, of any account, has been in the end allowed us. I have just now asked our book-keeper about it, and she says there is no single claim standing against them, to the amount of *one dollar*. If my groceryman should charge me for 150 lbs. of flour when I received only 100, I would go to him as I would to a neighbor, and lay the evidence before him; and even if he were a *bad* man, I think I should get courteous treatment, and justice.

Deciding to settle things by law is a serious matter, and I should want to advise almost every thing else before advising it. When goods are lost or damaged, or there are overcharges, we make a statement of the matter, and it goes back over the route, each agent appending his note to it. Sometimes the mass of correspondence and bills required to get at the error is a large bundle, and it may be that it was all about only 25 cents. I once told our agent, that if it made them all that trouble for so small a matter, I would rather pay the overcharge myself, and say nothing about it. I saw by his look that he appreciated the neighborly spirit. A short time after, we received a barrel of wax with a stave broken out, and about 25 lbs. of wax missing. I sent in my claim for damages, and received a reply, not very courteous or complimentary, to say the least. It stirred me up pretty well, and I was in just the humor for a fight by law; but on reflection I wrote, expostulating, and yet in a mild way, and to this our agent appended a little note, to the effect that he knew me personally, and that I was not a man who would ask for damages unless I had the best of reasons for so doing, and to the effect that I was always averse to making anybody trouble, when it could possibly be avoided. They paid for the wax at once.

I dwell on this because it is a most vital point before our growing young men. You know I am not boasting, but that I only seek to make peace. Now, then, to business: If I were to go to your station agent, any of you, and ask him what kind of a man you are, would he reply as above, or would he say you were always finding fault, hard to get along with, etc.? Had I gone to headquarters, and told them the story of my trunk, I feel sure I should have had courteous treatment; but, dear friends, if I have unconsciously earned a reputation for being one who "thinketh no evil," and that among swearing men too, I would not for the world spoil it. I would rather buy five cents' worth of rope as I did, and resolve to have a stouter trunk next time. I do realize what an outrage it was on you, friend Dadant, when you were a stranger in a strange land, and I pray that God may help us to have it done away with; and if it can't be done by kindness, then let us have it done by law.

HONEY FROM WHEAT-STUBBLE.

WHEAT THE GREAT HONEY-PLANT, AFTER ALL.

I BY to-day's mail send you a sample of wheat-stubble honey. The first day I cut wheat I noticed the bees working on the stubble, and I examined it and found that a clear drop of sap had run out of every stubble, and some had filled the upper joints, and some was running down the stubble. I tasted it and found it to be very sweet; and that day at noon I extracted the honey from the upper combs of one stand of bees, so as to get a sample of wheat-stubble honey. In five days I extracted 15 lbs. of this syrup, as I call it, from those same combs, and it was from the stubble, as there was nothing else for the bees to get honey from. We had the best wheat crop for many years, and the grain ripened before the straw; and when cut, the straw was full of sap. I think if you will cut wheat with the straw a little green the sap will always run out to some extent. I noticed it run out of the Fiets wheat the most, as it had a very hard straw. This cutting green accounts for friend Lybarger's frosted wheat, which he says he cut before it was commonly called "dead ripe."

THE FIRST YEAR AS AN A B C SCHOLAR.

I will hereby give you a sketch of my report for 1882: I am well pleased with my first year's business. I began the season with five stands, four blacks and one Italian. I transferred all to Simplicity hives, and they worked out 30 lbs. of foundation, all in wired frames, and gave me 500 lbs. nice honey, all extracted except 100 lbs., for which I get 20 cents for extracted and 25 for comb. They increased by natural swarming to twelve, all in good shape for winter, and all Italians but three. My Italian stand that I had in the spring, and increased two swarms, gave 300 lbs., all extracted. I received four first premiums at our county fair. So much for GLEANINGS and A B C. C. M. DIXON.

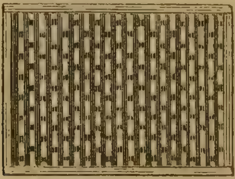
Parrish, Ill., Dec. 27, 1882.

Well, I declare, friend Dixon, and I say it, too, while I smack my lips over that honey, or syrup (I think I should call it syrup). I am going to sow a field of wheat, just on purpose to see if I can find honey by cutting it at different times. Why, bless your heart! it beats spider plant, Simpson plant, and all the other plants all hollow—it is the straws that are "all hollow," where the honey is, you know. What will ever become of us? Friend Miller, you can just go and dig your figwort roots all up, and plant wheat. Put phosphate on it, you know. Friend D., don't you know whether spring wheat will do? Can somebody else tell us more about it? Can't we get wheat that will ripen before clover comes? Oh, yes! I forgot to say it isn't the very nicest kind of honey, but you know we could let them fill up the brood-chamber with it, and that would save our white-clover and linden honey. It has a taste very much like green wheat straw. Friend D., was it nicely sealed up when you extracted it? Why, our friends in Texas are nowhere now with their horsemint honey. W-h-e-w! Oh! hold on a minute! Do the bees crawl clear down to the bottom of the straws, or have we got to raise a new race of long slim ones?

HONEY-BOARDS MADE OF PERFORATED ZINC.

SHALL WE EXCLUDE THE QUEEN FROM GOING "UP STAIRS"?

HOW many are there of us who use two-story hives, who have not at some time been annoyed by having the frames of the upper story glued fast to those of the lower one by honey bridged from one to the other, and all built together solid? In the Simplicity and chaff hives we have tried to obviate it by reducing the space to ¼ or 3-16 of an inch, and with some stocks of bees this will answer very well; but with others they seem bound to fill this space, no matter how small it is.



A "QUEEN-EXCLUDER" HONEY-BOARD.

The A B C class have often asked if we used a honey-board, or if an enameled sheet was not to be left between, and some have said this latter sheet with holes in it answered tiptop. Well, besides this trouble there is another one, from having the queen get above and laying eggs in the sections, for where we have extracted honey she would go above and lay great numbers of drone eggs, especially if we tried to utilize our drone combs for the extractor, and I believe it is pretty well demonstrated that the bees will store honey quite a little faster in drone combs than worker, during a heavy flow. Well, a honey-board made of perforated zinc, made as shown in the cut below, fixes all these troubles at once. They have been used enough the past season to demonstrate that they will do all we wish, and the evidence seems to be pretty strong that the worker bees carry honey above just as freely as if they were not there. At present we are able to furnish these perforated zinc honey-boards, lined around their edges with folded tin, for an even 25 cents each. This is for the regular L. frames, and they will fit Simplicity, chaff, or almost any form of L. hives. On account of weight they can not well be sent by mail without injury; but where wanted for a sample, we can send one by mail for 25 cents extra.

HALF-POUND SECTION BOXES.

MUST WE HAVE IT? AND IF SO, WHAT ARE TO BE THE DIMENSIONS?

AS there seems to be a demand springing up for half-pound sections, I have been trying to settle down on the shape that will be the most convenient to use in the Simplicity hive. I have made up my mind to use a section 4¼x3 2-5x1⅜; you will see that it will just take 10 to fill a frame 8½x17x1⅜, and it will take just 10 such frames to fill the Simplicity upper story, and it will take just 10 sections to each course in the Simplicity shipping-case, and take 100 sections to the case. I think *you* will like this plan, as you always like to count by ten and hundreds.

By using narrow slats in the bottom of the 28-lb. honey-rack it will hold 50 of the half-pound sections. The combs will be so near the thickness of natural comb that the bees will be very likely to build straight combs without separators; and if we should need separators we can use the same kind of separators that we use between the 1-lb. sections. I should like to hear from you and others on this subject. Please arise, and let us hear from you.

Rantoul, Ill., Dec. 21, 1882. J. A. OSBORNE.

Friend O., I like the idea of tens and hundreds tiptop; but I don't quite like your making the sections narrower, so they won't fit in the wide frames that hold the usual 1-lb. sections. It will be an enormous expense to the bee-keepers of our land to lay aside the wide frames and separators we have already in stock, and it will be complicating matters greatly, to even use something different in the new hives we may make or purchase. At Kalamazoo we talked about having 12 sections go in a wide frame in place of 8, and this same size would then go in all of our shipping cases and crates as well. In regard to prices for making them, unless some definite size is decided upon, so that we can keep machinery on them right along, we can not well give better prices than for the 1-lb. sections. The work on them will be nearly the same, any way, and the amount of material will make but little difference. To be frank in the matter, I somewhat doubt our ability to supply the demand for sections this season, and would advise all who don't want to be disappointed, to be getting their orders in at once.

LEARNING TO KEEP BEES.

AN A B C SCHOLAR OF LESS THAN A YEAR'S EXPERIENCE.

I BEGAN to keep bees last spring. I had read about them in a general way before; but about that time I began to read GLEANINGS; and, as a natural consequence, I soon had a very bad case of "bee-fever," and determined to keep a few myself. I did so with many misgivings. I live in the city of New York, but well above the thickly settled portion. There are no farms within miles of me, and of course no buckwheat. There is very little basswood, and not much white clover. I thought that a few colonies might manage to live; but what troubled me most was the fact that I would be away from home during July and August. I have since found out that bees do well, even down in the heart of the city, on the roof of a store, but I do not know of any that are left to themselves during two whole summer months.

BUYING SUPPLIES, ETC.

I wrote for prices to various parties, and in due time had lots of circulars. Not knowing any of these dealers, I thought I would establish a sort of competitive examination, and order bees to the same amount from several, and so find out which did the best; but the bees reached me at such irregular intervals that the test did not amount to much. I would advise my brother-beginners, before ordering from an unknown party, to find out two or three points: 1. How large a "frame" is; 2. Whether it is to have brood and honey in it, or not; 3. Whether the seller is going to keep your money long enough to raise the bees after he gets it, or until the price has fallen considerably.

Don't understand me as meaning that bee-men do business in this way as a general rule; but the beginner will not be any worse off for knowing that a three or four frame nucleus from one dealer is sometimes a good deal larger than a so-called "full colony" from another.

ALBINOS.

For the sake of variety I ordered one nucleus of albinos. I don't know whether I got the right sort of albinos, but I have received Italians from other dealers which no one can tell from those sold as albinos. Is there any distinctive mark, or is it only a question of a shade lighter yellow?

I received my first bees on the 16th of June, and I must confess that it was with a great deal of hesitation that I began my first actual experience. I set the shipping-box inside of one of my hives, and removed the wire cloth. Of course, the bees came out with a rush, and I sat down very suddenly. I expected they *would* come out; but when they did I felt embarrassed. I concluded that they were country bees, and so I left them for a couple of hours to get used to city life.

After I thought they had settled down I opened the box, took out the frames, and hung each of them between two of mine in the hive. Then I shook off the bees from one frame, carried it off a few rods and transferred the comb, returned it, and took the next. All this time I was expecting to get stung, and was rather astonished that I did not. I knew that all the authorities said that one *need* not be stung, but I have found out that green hands in any art are pretty apt to have these little needless things happen, and I had counted on a dozen stings at least. I will add here, that though it still makes me nervous to have a bee fly at me, and though I have "fussed" over my bees continually, when they were in a good humor and when they were not, I have had only three stings in all. Twice I thought the bees served me exactly right for my carelessness, and the third time I guess they did it only "for fun." A bee-sting doesn't hurt me much, and I can never find the place half an hour afterward.

SMOKE FOR BEE-STINGS.

I can not, however, agree with you in denying that smoke may be a positive relief for stings. I once, while out camping, tore a good-sized piece of the thick skin off the palm of my hand, making a very bad sore. I was urged to try the smoke from burning sugar for it; and though I had no faith in it I did so, and was astonished at the relief it gave me. Next time you hurt yourself, just smoke the place with sugar till it is yellow or brown, and see.

GETTING A SWARM OF HYBRIDS, WITHOUT BUYING THEM.

My second nucleus came June 28th. The dealer who sent them sent an empty hive with them to make up for the delay. I was very busy that day, and so I told the boy who brought them from the express office to leave them in the shade near the others, and not to open them. Now, it was nearly dark before I had time to attend to them. When I did go out I found lots of bees flying from the hive, and thought at first they had got out, but found, on examination, that one of the hives was closed with wire cloth, and contained four full and one empty frame, with a proper number of bees and a queen. After transferring them it was so dark that I could only see that in the other hive were four empty and one full frame. I thought the full comb had been put in there to give the bees in the other hive more room, and that my first bees finding it unprotected had attempted to rob it. As it was so late I thought I would not do any thing about it, but would come out early and see that their robbing stopped with that one comb. Next morning the hive seemed full of bees; and on noticing them more closely I found they had only two bands, and were darker than the others. This set me to investigating, and it was not long before I found out I had a fine swarm of hybrids. Where they came from I do not know; but there they were already hived, and they have been doing well ever since, raising a pure queen for themselves from brood given them this fall. If the empty hive had been there for several days I should not have thought it so strange; but the bees came the same day the hive did. Now, what do you think of it? I wrote to the man I bought the bees of, and he said he sent only one colony and an empty hive. Is it possible that in the few hours that hive stood unoccupied, the bees found it, concluded that it was a good place to keep house, and moved in, bringing their queen along? I thought the hive might possess some hidden virtue; but though I "set it again" after transferring, I can not report any further captures.

All of my "dollar" queens, and I have bought no others, have turned out pure except one. That one I am in doubt about. Most of her bees are beautiful light Italians, with three bands; but once in a while I see one that has no yellow at all. No one would notice them unless looking specially for them. Would you call that queen a hybrid?

MELILOT, ETC.

White clover bloomed here June 9th, and the tulip-tree (whitewood) on the 10th. I never saw a bee on white clover, though I watched it very closely. The tulip just roared with them. But when melilot opened June 25th, the bees left the tulip for it. I do not think half enough has been said in favor of melilot. My bees began work on it June 25th, and every time I looked at it from that time until Nov. 12th, I found bees on it. The only trouble was, that there was not enough of it near me to go very far. I don't mean that the same plants lasted all that time, but in one particular patch of it nearest my bees there were some plants in bloom, and the bees working on them during the whole time. This, too, although July and August were very dry months, and though we had several frosts in October and the first part of November. It grew on and near the railroad, and seemed to do as well in a bank of broken blast-furnace slag as anywhere else.

THE HORSE-CHESTNUT.

Another source of honey that I have not seen mentioned is the horse-chestnut. It is a favorite shade-tree here, and during the time it is in bloom it is covered with bees until the raspberry opens. Even then they work on it in the morning. Its great value is, that here it fills the gap after fruit-bloom. Suppose you try two or three in the honey-farm.

DO BEES VISIT SEVERAL KINDS OF BLOSSOMS FOR A LOAD?

One more item: Prof. Cook says that a bee visits only one species of flower on each trip. I have the impression, that you indorse this view. I have repeatedly seen bees fly from peach to apple blossoms, and also from blackberry to raspberry, and *vice versa*. In the second case they had pollen in their baskets. I did not notice pollen in the first. In each case one of the plants was failing.

My account with my bees stands as follows:

By hives and frames on hand, - -	$29 00	
" material and implements, - -	10 68	
" 5 swarms (pure and strong), - -	50 00	
" 2 " (hybrid and weak), - - -	12 00	
" 41½ lbs. extracted honey@16, - -	6 64	
" 1 " comb honey, - - - -	20	
Total receipts, - - - -		$108 52
To materials and implements, - -	$20 68	
" bees and express charges, - -	24 60	
" labor, - - - - - - - -	1 40	
" feed, - - - - - - - - -	2 00	
Total expenses, - - - - -		$48 68
Balance (clear profit), - - - -		$59 84

Which is over 122 per cent of the amount invested. My bees had over 200 lbs. of sealed honey Nov. 10th, which I left to make sure of abundant winter supplies, so perhaps I shall have some left in the spring. I would not sell any of the stock on hand at the prices I have put on them.

Perhaps in perfect fairness I should have charged the bees with my labor in hive-making, etc., but I can't tell exactly how much it was, as I worked only at odd times; but a carpenter would do the same work better for $ 0.00. On the other hand I have not given credit for twenty-five or thirty dollars that I would probably have spent for recreation in the time devoted to my bees, nor for at least a hundred dollars' worth of pleasant and interesting amusement and instruction.

As on May 1st I had no bees, I suppose I must sign myself — F. D. CLARKE, 0.

New York City, Dec. 15, 1882.

Friend C., although your letter is a little long for a beginner, there are several points in it I would commend. Principally, among them your concluding thought, that without the bees you would have spent a good deal of money for recreation (and may be not found it then) that was saved by keeping the bees. You also have not greatly exaggerated it, I believe, when you say you have had a hundred dollars' worth of amusement and instruction.—About the albinos: I entirely agree with you. They are only a strain of lighter Italians, and never ought to have been called albinos.—I presume we shall have to give up, that bees do load up from different plants at times, but I did not know it before.—May I suggest that the smoke helped the pain in just the way our minister helped the horse that balked? It was a livery buggy, and we were going home from a picnic. The horse balked in a very trying place, with a string of teams behind us. "Wait and I'll fix him," said he, and out he sprang, and unbuckled the girt, flopped it back and buckled it again. The horse turned his head, as if to see what was broken, and in so doing his "horse sense" forgot the "pout," and when his driver jumped back into the buggy, and chirruped to him in a natural way, off he went, and we were all happy. When you smoked the "hurt place" you forgot the pain, and were "cured."—I should call the queen a hybrid.

HOW TO GET QUEEN-CELLS, WITH THE OLD QUEEN IN THE HIVE.

TWO, THREE, OR MORE LAYING QUEENS IN ONE HIVE.

LAST spring I had occasion to get the brood all out of a lot of about 30 combs as soon as I could; and as the weather was too cold to take them away from the bees, I had to devise some plan to keep the queen away from them, and to give the bees access, which was as follows: I removed the covers from 3 Simplicity hives, with stocks in, but left the cloth cover on, slipping it back only about ½ inch, so as to let the bees pass up; then I set on a second story, and in these I put 10 combs of the brood I wished to get out, without any hatched bees, then put on a quilt and lid. After a week's time I looked to see how they were doing, but was greatly surprised to find quite a lot of fine capped queen-cells in each of the 3 upper stories.

As it was too early to divide, I thought I would let them remain, and try the experiment to see what I could make of them; in hive No. 1 the cells were all torn down about the time they should have hatched. Whether a queen ever hatched there or not, I do not know; but I could never find one. No. 2 hatched a fine queen, and kept her until time for her to fly out to meet the drone; then she was missing. I can not tell what became of her. No. 3 also hatched a fine queen. In due time she became fertilized, and began laying in her proper apartment, the upper story; then I set the story off, and had a new colony with a laying queen, without any introducing, and still have it.

I will add, that when I found the young queens hatched, I raised the top story half an inch to give an upper entrance, and to give the young queens a chance to go out and return without going to the lower apartment; but at all times the bees had free communication between the two stories. I did not try the plan again, but I am satisfied that by it I can get queen-cells whenever I wish, without making the colony queenless. In neither case was the queen below disturbed in the least.

A. A. FRADENBURG.

Port Washington, O., Dec. 18, 1882.

Friend F., you have omitted to tell us whether the old queen went up and laid eggs in the upper story, among the queen-cells. I presume not, though it would be very desirable to have them do so. I have had two colonies in a one-story hive, and reared queens in one while the other kept on laying; but the latter always stayed on "her side of the house," even though the combs were not separated at all.

BLACKS VERSUS ITALIANS.

ONE CANDIDATE YET REMAINING, IN FAVOR OF BLACKS.

I NOTICE on p. 617, December No. of GLEANINGS, you advise D. D. Lester to "replace all black queens with Italians." Now, I have kept both blacks and Italians for the past four years, side by side in Simplicity hives, and the blacks have done best every time. I have spent considerable money (for a poor man) in trying to get some Italians that would beat my black bees gathering honey; and with that end in view I sent to Doolittle for one of his choice tested queens in June, 1881; of course, I didn't expect her to do much that season; but this year I thought the blacks would have to take a back seat; but they came out ahead as usual. I also bought queens of H. Alley and J. M. C. Taylor. Now, I think four years of fair trial with queens purchased from well-known breeders is a fair test, for this locality at least, and I propose, this coming season, to "replace all Italian queens with black ones."

Now, my black bees are nothing to brag of; 75 lbs. of comb honey is the most I ever got from one colony; but that is better than I ever did with Italians. I have no doubt that the Italians will do better than the blacks in some localities; but here the season is very short, commencing with fruit-bloom and ending with white clover, about July 4th; and colonies that have not enough honey in their hives to last them over winter will not get it that year; and if not fed in the fall, they will starve. I did not get any more honey by introducing Italians, but I have got a lot of savage, vicious hybrids that will sting anybody who comes near their hives.

One thing I notice about my bees (blacks, Italians, and hybrids), that is not in accordance with the doctrine laid down in the works of Root, Quinby, Langstroth, Cook, and other authorities: They sting worse when honey is coming in freely than at any other time.

W. E. FLOWER.

Ashbourne, Pa., Dec. 13, 1882.

Friend F., it is surely accidental, or because you have not yet got the "hang" of the Italians, with their peculiarities, that makes it seem to you that the blacks are ahead. While reading your letter I watched to see if I could tell whether you used an extractor, or worked only for box honey. I rather think the latter, and this may be one reason for your experience, although I should suppose friend Doolittle's strain would make comb honey, as a rule. I would not replace the Italians just yet, if I were you, for you, like all the rest, will surely change your mind after a little further experience. It occurs to me here, that an illustration I used in my Sunday-school class last Sabbath may be of use to many of us. The boys thought the best evidence a person could have would be his own eyes. To show them their mistake I gave them the following: Suppose, boys, I should see Mr. Jones on the street to-morrow; but on mentioning it afterward, Mrs. J. and all the family should assure me that he was confined to his bed by sickness, and never arose once during the whole day. If the family had some object in proving that he was not up town, of course I might question their sincerity; but in this case they were disinterested witnesses, and one would be well nigh crazy who would presume to say they were either mistaken or dishonest. Which am I bound to believe, my own eyes or the testimony of perhaps half a dozen good people? It *is* quite possible, *I* might have met somebody who looked so wonderfully like him that my eyes were cheated; but is it probable they had somebody in bed all day, who was not that identical husband and father? Well, now, it is not half a dozen witnesses that testify in favor of Italians, but it is thousands of our countrymen, friend F.; and as further proof, tons upon tons of honey are piled up yearly by those who never think of offering queens for sale, but only get bees to get the most honey, and comb honey at that. I can not agree, either, that any locality, or any sudden flow, would favor the blacks and not the Italians. Where you get 75 lbs. of comb honey with black bees, I should not be surprised to see friend Doolittle, with his strain, get toward 150, and I say this without intending to reflect on your skill at all. Your concluding idea, that your bees sting worst while getting the most honey, I must think also an accident rather than a rule. If I were at your place when the honey-yield suddenly ceases, it seems to me I could surely show you the bees behave worse when they begin to try all around to rob their neighbors. Is it not so?

OREGON, AND ITS ADAPTABILITY TO BEES.

ALSO A VALUABLE REPORT ON HONEY-PLANTS FOR ARTIFICIAL PASTURAGE.

THIS is a very good climate for bees. There is but very little extremely hot weather in the summer, and the winters are mild; there is but very little freezing weather, and not much snow. It is no trouble at all to winter bees on their summer stands here, without extra care. Very few bees die through the winter, and swarms nearly always come out strong in numbers in the spring. There is no bee dysentery here. About the only losses are those that do not store honey enough to keep them through the winter. The only protection they need in the winter is a roof to keep the rain off from the hives, as it rains a great deal here in the winter.

This is not a very good bee country naturally, for one reason, and only one: there are not flowers enough here of the kinds that bees work on, especially in the latter part of the summer, and in autumn.

There are some localities where bees do tolerably well, and others where they will scarcely make a living. There are some localities in this part of Oregon where white clover has come in naturally in large quantities; on that, bees do quite well, and make quite a lot of white-clover honey.

White clover blossoms here about the middle of May, and continues in bloom about 2 months, when the dry weather drys the blossoms up for the season.

THE PURPLE-BLOSSOMED FIREWEED, AGAIN. (SEE PAGE 514, OCT. NO.

There are other localities, mostly in the mountainous regions, where there have been fires in the timber, where there grow large quantities of elkweed, called by some fireweed. In such locations bees make large quantities of elkweed honey, which is of a clear, greenish-white color, and has a peculiar flavor which does not suit my taste as well as clover honey. It grows from 4 to 7 feet high, and each stalk terminates in a long spike of pink blossoms. In the center of each blossom is a small drop of honey. Elkweed blossoms about July 1st, and continues in blossom about 2 months, when it soon all ripens, and the air is filled with its feathery seeds. The pollen from elkweed is bright green.

In the Coast region, which lies between the Coast Range and the ocean, there is considerable maple timber, which blossoms about April 1st, and stays in bloom about a month, from which bees make large quantities of honey of good quality, fully equal to clover, I think.

There is also much huckleberry, from which they gather considerable honey, of good quality.

Bees swarm here mostly in May and June. A moderately large swarm of bees requires about 15 lbs. of honey to keep them through the winter here. I think bees would do well here, if any one would sow artificial pasturage for them, so they could have plenty of flowers to work on all summer.

EXPERIMENTING WITH HONEY-PLANTS.

I have been experimenting some on several kinds of plants that have been recommended for bees, and I will tell you the result:

1. White clover is a good honey-plant, and the honey is of good quality; but I think there are several plants that will yield more honey to the acre.

2. Alsike clover. From what I have seen of alsike I do not think it as good a honey-plant here as white clover.

3. Red clover. I have never known bees to gather much honey from red clover in this country, not even the Italians, except in one instance, when the blossoms were filled so full of honey that the blacks worked freely on it; it was the first crop too.

4. Sweet clover; blue, or bee clover. I have tested this, and the bees did not work much on it, and it stayed in blossom but a short time.

5. Sweet clover, white. Bees work on it considerably part of the time, but it does not seem to yield a very large quantity of honey.

6. Bokhara clover, white, is a little different from white sweet clover, and blossoms about 10 days earlier, but yields about the same quantity of honey, and keeps in blossom about the same length of time — about six weeks here.

7. Sweet clover, yellow. I sent to you 2 years ago for some seed of this variety, and you had some sent to me from "Plant Seed Company," St. Louis, Mo.; but the seed was not genuine. After it came up it spread all over the ground, and blossomed the first season; it had very small yellow blossoms, and was no account for bees. I think it must have been yellow trefoil. Then I threw the remainder of the seed away in a waste place among some trees, where it came up, and there were three or four plants of the genuine yellow sweet clover came up among the rest, which I did not notice until the next season, when it blossomed; but being in the shade, the seed dropped off before it ripened. From what I see of it, I think it is a better honey-plant than the white. The blossoms are larger and more fragrant, and it blossoms about 2 weeks earlier. I should like to get some of the seed. If you know of any one who has the genuine yellow sweet-clover seed to sell, please inform me.

8. Sainfoin. This has not proved to be of much account for bees.

9. Scarlet clover. The bees did not work on this at all.

10. Catnip. Good for white-faced bumble-bees, but not for honey-bees.

11. Phacelia. The bumble-bees seemed very fond of it, but the honey-bees did not notice it at all.

12. Hoarhound. Bees work well on it, but the honey has a bitter taste.

13. Motherwort. Bees work considerably on it, more than they do on catnip, but not as much as they do on hoarhound.

14. Buckwheat is not of much value as a honey-plant in this country. Oftentimes they will scarcely notice it at all, and I have never known it to yield large quantities of honey here as it did in Wisconsin, where I used to live.

15. Sunflower. Bees very seldom work much on them here.

16. Borage is a good honey-plant. When it does well it will yield the most honey to the acre of any plant that I have tried; but it needs careful cultivation to give the best results. Its only fault seems to be in shedding its blossoms too quickly in dry hot weather, or when not properly cultivated. It blossoms in about 2 months after sowing, and continues in bloom 2 months or over. It will live through the winter when sown late, and blossom early in the spring. By planting three times during the season, it can be kept in blossom from the middle of April until the middle of November; it is also a good herb; and drinking the tea made of the leaves or flowers will keep any one in a healthy condition.

17. Blue thistle. I sowed some of the seed this spring. It came up, and has formed large spreading plants, but does not seem inclined to blossom the first season. It looks as if it might furnish an abundance of blossoms next season. It is about the same nature as borage, but does not require as careful cultivation. I have no doubt it will be a good honey-plant, if the blossoms yield honey equal to borage-blossoms.

18. Mustard. Bees work pretty well on mustard, and seem to gather quite large quantities, both of honey and pollen, but it does not yield as much honey to the same ground as borage.

19. Rape. Bees work some on rape, but it does not seem to be nearly equal to borage as a honey-producing plant, and keeps in blossom only 3 weeks here.

20. Evergreen-blackberry is a good honey-plant; it keeps in blossom over 2 months, and yields large quantities of honey, but not much pollen; bees work on it continually "from early morn till dewy eve,"

and it yields much more honey than any other of the berry tribe.

21. Raspberry. Bees work considerably on both the red and black varieties, but neither of them yield anywhere near as much honey as the evergreen-blackberry; the common blackberry does not either.

22. Mignonnette. Bees seem to be very fond of mignonnette, but I do not know exactly how large a quantity of honey it yields. I think the yellow variety is the best and prettiest.

23. Dandelion. Bees almost always work on them; they yield some honey and some pollen, but they do not appear to yield a very large quantity of honey to the acre, and I do not like the flavor of the honey either.

24. Alfalfa. Bees do not often work much on it here.

25. Sage. The common sage is a pretty good honey-plant here, and yields quite a large quantity of honey.

I am taking GLEANINGS. This is my first year, which will expire with the December number. I like it first rate, and the principles which it advocates; for I believe in God and the Holy Bible, and shall try to live according to its teachings. I do not swear, neither do I use that filthy weed tobacco, nor get drunk with intoxicating liquors, and I heartily indorse your efforts to persuade people to live Christian lives, and leave off the disgusting habit of using tobacco, and deal squarely with their fellow-men. I also admire your efforts to advance the bee-keeping industry. I have not kept bees since I came to Oregon, with the exception of one swarm, until this season. I used to have some in Wisconsin, before I was grown up. I now have 14 swarms. I hunted wild bees a while this summer. I found 7 bee-trees, and succeeded in saving 4 of the swarms. When their nests are near the top of the tall fir-trees, they generally smash up so as to kill most of the bees. I cut one in which the nest was about 150 ft. from the ground.

I have bought 80 acres of land, 26 miles from Portland, which I intend to convert into a honey-farm, for I intend before long to make a business of keeping bees, as it is my natural occupation. I do not intend to raise bees and queens for sale, but only for honey. The land that I have bought is pink with elkweed when it is in blossom, but I shall burn it over next season, and seed it with something that will make better honey. Elkweed honey looks pretty well, but the flavor is not very good. I want to sow the kind that will yield the most good honey to the acre, and make a handsome flower-garden too; for I am very fond of flowers, so I have concluded to sow and plant the following kinds, which I think will repay cultivation for honey alone:

FRIEND WARREN'S CHOICE OUT OF 25 HONEY-PLANTS.

Borage, yellow mignonnette, blue thistle, evergreen-blackberry, yellow sweet clover, red sage. I shall also sow thyme and yellow sweet sultan in my garden, but I do not know that they are of any value as honey-plants, for I have not tested them.

I love the fragrant flowers, I love the humming bee;
I love the pleasant summer, when birds and bees are free.
I love the pleasant sunshine, I love the shady wood;
I love the true and gentle, I love the kind and good.

MORRELL E. WARREN.

Portland, Mult. Co., Oregon, Nov. 27, 1882.

Friend W., when I first looked at your letter I was tempted to think it too long; but after getting into your reports of honey-plants I thought it about right. I confess I was a little disappointed when I found you had but one hive, but I afterward reflected that you could tell much better about the quality of the honey from a limited area of plants, with one hive, or only a few, than you could with a whole apiary. If I had only one hive of bees, and no more within several miles, I could tell you about the quality of figwort and spider-plant honey, and the amount of honey they would yield per acre, and many other things, which I find quite out of the question with hundreds of stocks about me. Go on with your honey-farm, friend W., and let us hear how it comes out. Thanks for the little poem.

SEX OF BEE OVA.

SOMETHING MORE FROM THE FRIEND WHO WROTE ON P. 125, MARCH, 1882.

I HAVE read with marked attention the way in which my opinions have been received by you and American bee-keepers generally, and a year has almost glided past since I wrote the brief article on the heading of this letter, and I still have cause to hold on to the opinion I then expressed; viz., That, by the treatment to which the bees subjected the ova, they could produce male or female from the same egg. I then started the hypothesis, that the egg of a fertilized queen was "neutral"; but since then I have found myself in a quandary; for although I found male and female produced from worker eggs, every time I have tried to raise queens from drone eggs I have failed. I have placed them in newly raised queen-cells, and they disappeared without leaving a trace behind. I have given queenless hives small squares of drone eggs, and when I was about to reach the supposed goal, in eight or ten days every cell was torn down, and here I am still without a solution. I have tried hard to think that the cell was the sole cause of failure, arguing that a drone-cell would give a small formation to queens, and the season was too far advanced for my fully testing this, although the disappearance of the male egg from the queen-cell half answers this.

Then I have seen the theory you propound, of the "bees removing sperm from egg," and it is quite possible you may be right. Could not this be tested by those who have good microscopes?

You ask me if I noted what the eggs hatched out which I saw bees dropping into cells. I can not answer. It was on worker comb, and I did not think the queen was over healthy, her wings having assumed a rusty-like appearance. I superseded her and sent all to the hills, not having thought of the act as uncommon.

Now, right here permit me one question: Have you not observed, when a queen is put into a hive, it may be for the first time, or on returning her after a brief absence, the manner in which she is examined? Do not the bees examine her as if expecting her to drop eggs?

With reference to bee moving eggs from one cell to another during the spring months, one of my hives became queenless; from what cause I could not explain. Only one or two frames had eggs in them. Although the swarm was quite a small one, my first cause of suspicion of an absent queen was the eggs appearing in drone-cells. The same thing was noted by Mr. Charles Carnegie, Marykirk, as occurring in a queenless hive. Now, I find you say, that, in the case of drones and queens raised from the same eggs, the drone would not be of sufficient age for mating queen. This I can not quite understand; since drones will hatch eight days after the queen, then there would be thirteen days for the drones to be on the wing before the 21 days which are given to queens for mating. I find you will have to send me an A B C book, for I can not suppose that they would require more than a week to take an airing. K. EDWARD.

Montrose, Scotland, Dec., 1882.

Friend E., a drone egg can not produce a queen, nor any thing like it. This has been for years well established. In some few cases a drone has hatched out from such a queen-cell, but he was just like any other drone. A drone egg can not produce a queen or a worker; but the point you made, that a worker egg may, by some means known to the worker bees, be made to produce a drone, may be true. I do not think that either the microscopes or the microscopists of the present age are equal to the task of helping us much in the matter.—I have seen the workers thus examine a queen just given them, and I have also seen queens extrude eggs which were greedily taken by the bees; but I never knew what they did with them.—As you state it, I confess it seems possible that drones may be old enough to fertilize a queen when the eggs for both were laid on the same day. A queen *may be* fertilized when 21 or more days old, but they are usually laying at 10 or 12 days.

RAISING QUEENS, WITH A LAYING QUEEN IN THE HIVE.

HOW FAR ARE WE ABLE TO DO IT?

I SEE that Mr. Alley is about to give, in a book, his method of raising queens in full colonies with laying queens. I am glad of it. I expect to learn some profitable lesson from him. But before his book appears I desire to give, through GLEANINGS, what little I have learned on that subject.

While extracting honey I first noticed, that, when combs containing incipient queen-cells, with eggs or larvæ, were given to other colonies, that these cells were not destroyed, but completed. From this I took a hint last summer, and in a few instances gave cells just started, to some strong colony, putting the comb containing the cells into the upper stories, or some part of the hive not frequented by the queen. In this way I succeeded in getting young queens raised in hives containing laying queens. The colonies I selected to raise these queens were the strongest I had.

My experience is limited to a few trials, but it is enough to assure me that the method is practicable. I think it would be an advantage to shut the queen off from the part of the hive in which these cells are placed. I removed the cells a few days before the young queen emerged. If left to hatch in the hive, it might be necessary to protect the cells by cages placed over them. If the lower part of the hive is used, the queen could be shut out of the side the cells are in, by a division-board. If the upper story is used, a perforated zinc could be used to keep the queen from ascending. In the few experiments I made, I did not shut the queen off.

These incipient cells could be arranged in rows on the edge of a comb. If Mr. Alley has some method of getting these cells started as well as completed in these full colonies with laying queens, then he has achieved what I have never tried to do.

Milroy, Pa., Dec. 18, 1882. J. W. WHITE.

On p. 12 we have an article on the same matter; and below we have something that pretty well supplements what you have given us, friend W.

HOW TO GET QUEEN-CELLS WHERE YOU WANT THEM.

The best way to graft for queen-rearing is to shave the comb down as close as possible, without cutting the eggs. Cut off the bottom of the queen-cup, and set it over an egg; press slightly into the comb; then, if properly done, you have an egg in the cup just in its natural position. If you make the cups by molding, make them cone-shaped, then cut off the apex. You can stick on as many as you wish queen-cells. F. DELLA TORRE.

Baltimore, Md., Dec. 19, 1882.

Friend D., may I ask if you have practiced this enough to fell sure it is practicable? Perhaps some of the friends have forgotten that this is an old subject. The following is an extract from GLEANINGS, 1878, p. 323:

> Well, now, you see we will just take a comb-guide and fasten little knobs of wood along the edge like this (Fig. 1):—

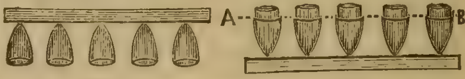


Fig. 2. Fig. 1.

ARTIFICIAL QUEEN-CELLS.

> The pointed pieces of wood may have a pin point in their lower ends, that will hold them to the comb-guide until the whole machine is immersed in melted wax up to the line A B; take it out, remove the sticks, and you have a string of queen-cells like Fig. 2. Take these to your best imported stock and put small larvæ into each cell; hang it in a queenless and broodless hive, and I will warrant a string of nice queen-cells, nicely capped over in due time. If we have a powerful colony, several such sticks may be used; for a full stock can supply as many as fifty cells with food all at once, and in the height of the season it may be even more. Nice queen-cells to order, strung on a stick, for 10 cts. per dozen, sent by mail, postpaid!

FRIEND HEDDON AND HIS APIARY.

WHAT THEY THINK OF HIM AT HOME.

WE extract the following from an article in the *Republican*, Dowagiac, Michigan:—

> One of the most important business interests in this city is Heddon's apiary and bee-keepers' supply manufactory. The proprietor of this institution, Mr. Heddon, began bee-keeping as a specialty in 1869, and was the first specialist in Michigan, there being but few in this country at that time. His capital stock did not exceed $500, but the business has increased steadily since, giving him a nice profit, which Mr. Heddon has for the most part kept in the business. He has owned at one time as many as three apiaries and 550 colonies of bees, having now 400 colonies in his apiary in this city. He has always produced both comb and extracted honey, formerly giving preference to the latter, but of late years producing mostly comb. The wholesale prices have ranged from 12½ to 25 cents for comb, and 10 to 18 cents for extracted. His honey has always been put up in better style than any other producer in the U. S. The following is from the largest honey dealer in the West:—

Your honey is put up the nicest of any we have seen, and is going off at wholesale at 25 cents, faster than we anticipated. R. A. Burnett.

165 South Water St., Chicago.

He sold D. D. Malloy & Co., of Detroit, $1167 worth at one shipment, all put up in glass jars, and packed one and two dozen in cases.

THE LARGEST YIELD OF HONEY

From one hive was 410 lbs. during one season. The largest yield from one hive in one day was 29¾ lbs. This was extracted honey, except about 50 lbs. of the 410. These figures only show what can be done, with all conditions the most favorable. With so many bees as he now keeps together in one area (an area, or bee-range, consists of a field whose diameter is 6 to 8 miles), the pro-rata yield is quite small. Where nothing was gathered before, he has gathered together and sold something over $20,000 worth of this produce during the last 13 years.

Mr. Heddon has formerly given employment to one or two hands during 8 months of the year, and he now employs three or four during the summer season, and one all the year around. This year's crop of honey was some over half comb, the bulk of which was sold to Colter & Co., of Cincinnati, they sending $720 for 4000 pounds, the price being 18 cents per pound here, cash in advance. He still has some 3000 pounds of extracted honey now on hand (candied solid) which he is keeping to fill orders for regular customers who depend upon him from year to year, and the home trade.

He sent a 200-lb. cask to Karl Rudd, Sheldon, D. T., a few weeks ago.

EXTRACTED HONEY

Is gaining ascendency in demand over comb honey every year, and the favorite way of handling it is in the candied state, as that condition is positive proof of purity, and not only prevents all daub and leakage, but can be retailed in more useful packages, and gives the purchaser a choice of consuming it in the candied state (one much preferred by many), or in the original liquid state, as exposure to 180° Fah. of heat, brings it back to former conditions, the color and flavor remaining the same.

His apiary fixtures having grown into demand more and more every year, he is now manufacturing and dealing in

BEE-KEEPERS' SUPPLIES,

Buying his lumber here, and doing his machine work at our sash factories. This year's sales foot up to a little over $3000.

COMB HONEY; COVERINGS FOR THE FRAMES, ETC.

ONE-POUND SECTIONS.

I HAVE a good many inquiries lately; and if the friends will be patient I will try to answer them through the columns intended for mutual interchange of thought.

I don't know whether I can get as much honey in 1-lb. as 2-lb. sections; for since discarding 6 to 10 lb. boxes, I have never used any thing but the 1-lb. section. I think it likely, however, I might get more in 2 lbs., but the 1 lbs. sell better; and moreover, all my fixtures are arranged for 1 lbs., and I should not want the bother of changing, without seeing a very plain prospect of gain. I am old fogy enough to prefer dovetailed sections.

SEPARATORS.

So long as I raised honey only for a home market I did well without separators; but to pack the sections in cases for shipping, I found separators a necessity. I wish I could do without them. They give a section a clean look, and a section raised without separators looks so full and plump. Get one of A. I. Root's catalogues, and you will find full description and illustration of the frame and separator I use; the separator being 3¼ inches wide. By looking at the illustration you will see that no bee can get on the outside of the sections. Before buying any more tin for separators I think I shall try wood 1-12 to ⅛ inch thick. I was much interested in Mr. Hasty's experiments, and thank him for saving me the trouble of trying linseed oil; but the thing that I should have the most confidence in is propolis.

QUILTS.

May be they ought to be called sheets, for that's about what mine are. I have tried nearly every thing, except woolen cloth and wooden slats. For a time I was better pleased with enameled cloth than any thing else, and have used, I think, over 150 of them; but I don't think I shall ever get any more. If the bees get at the wrong side of them, the cloth is very soon all gnawed away, leaving merely the enamel, which is without strength. The bees seem to gnaw them much worse than they do ordinary cotton cloth. Then, too, as they get old the enameled sheets become hard and brittle, and easily tear to pieces. I have been a little puzzled to notice a great difference in the lasting of the same material at different times. Some thin cotton cloth that I got by mistake seemed to last as long, or longer, than heavy duck cloth. I think the difference is largely owing to the time of year when the sheet is first put on. If a sheet of new cotton cloth is first put on in early spring, or after the honey harvest is over in the fall, I think the bees will test its strength pretty thoroughly; but they will leave whole and cover over with bee-glue that which is put on in the working season, perhaps because they are too busy to gnaw it, or because propolis is plenty to cover it. After it is once well coated with propolis all over, it will last for years. All in all, I think the best sheets I have ever used are the first I made when cloth sheets were first introduced. That was years ago, and some of them are in use yet. They were made after this fashion: Good cotton cloth was used, a piece cut twice the proper size for a quilt, or something larger, to allow for shrinkage; the piece was doubled over, and two sides sewed together. This makes a sort of bag, which is turned inside out, and a newspaper or two put into it. If such a quilt is put on when the bees are busily at work it will last a long time. I have sometimes thought the newspaper, besides making it very warm, helped to keep the bees from gnawing the cloth. I have known in more than one instance a hole to be gnawed into the cloth, and one or two thicknesses of the paper gnawed through, then cloth and paper both well glued over by the bees, and not disturbed afterward.

In cleaning up supers, frames, and sections, each year, several pounds of propolis are collected. I have thought of taking this and melting it in a boiler or dripping-pan, then dipping in new cotton sheets, and I don't see why the bees would not respect them as well as if coated by themselves.

C. C. Miller, 174 — 202.

Marengo, Ill., Dec. 23, 1882.

Very good, friend Miller; but do you know that propolis will melt like wax, so a cloth can be dipped in it? Another thing: Why should the enameled sheets ever be put over the bees cloth side down? or, rather, why should bees ever have access to the cloth side? It is the only thing we have ever seen that could be kept clear of propolis. I, too, should be very glad to dispense with separators, but I do not at present see how it can be done. After your wooden separators are used a few times, I think you will find that the bees are pretty apt to stick bits of comb to them.

LAYING WORKERS AMONG THE CYPRIANS AND HOLY-LANDS.

DRONES FROM WORKER EGGS, AGAIN.

ON the 11th of last July I shook a full stock of Cyprian bees into a nucleus hive, destroyed their queen, and gave them two solid Langstroth frames of honey, and one frame from which the honey had been extracted, inserting a strip of comb containing eggs from my breeding queen in the empty frame. This was in the afternoon. Their queen was a year old. The next day I examined them and found but two or three queen-cells started —poor ones at that. I also found that these bees that had never been queenless in their lives were laying eggs plentifully, filling al! the *empty* cells in the inserted strip, and in some cases putting eggs in cells *already* filled by the queen. The next day matters were worse—many cells were half full of eggs, and even the queen-cells were covered over the bottom with eggs, and new cells were started on the comb at the right of the strip of eggs given them. These I carefully removed, and destroyed the eggs near by. By my daily examinations I prevented any cells being nursed outside of the strip given them. But the workers continued laying until they had a strip 11½ inches long instead of 5½ inches, as at first. When the queen-cells and brood were finally sealed over, there was rarely a worker cell to be seen, and the others produced drones, for I saw them hatching. But as soon as they had these drones sealed over they seemed to be satisfied, and ceased to lay. Having no confidence in their queen-cells, I removed them and gave them a ripe cell from another stock prepared in the same manner the same day. The queen hatched, but never became fertile.

When I thought it useless to keep her longer I killed her and gave them another cell. The workers destroyed this cell *and commenced laying again.* They destroyed another and another, until I had no more to give them, and they were left hopelessly queenless. In a few more days a neighbor came walking up to where I was working among the bees, with an old queen between his thumb and finger. I had been wishing for a queen; so I clipped her wings and dropped her into this hive, without any ceremony. They accepted her and *again quit laying*, and were soon full of sealed brood. I killed her then, as she bore the name of producing cross bees, and gave them a cell. This hatched, but failed to become fertile. Fearing she would never become so I killed her also, and caged a laying queen among them. By morning the workers were laying again as badly as ever, and continued to lay till cold weather, but finally ceased altogether, and are now a good stock, the bees mostly the progeny of the last queen.

At another time, Sept. 13, I destroyed three queens; one a laying queen two months old, one just fertilized that day, the third a virgin. This was in the evening. Early next morning, *only twelve hours afterward*, the strips of eggs given them for queen-rearing were so filled with eggs by the workers as to be utterly useless. An old bee-keeper, who was present when I made these stocks queenless, and also at the examination in the morning, declared he would not have believed this, if he had only heard of and not seen it. And I hope the friends, and especially those who think that drones can be raised from worker eggs, will not think I am making an unwarrantable assertion when I claim, that laying workers may appear in a few hours after the stock has been made queenless, no matter what its previous condition has been, and that they may lay for a short time only, and cease when they have a supply of drones. In close connection with this I want to assume, without taking space to prove it, that the eggs and larvæ in strips of comb inserted for queen-rearing are many times missing shortly afterward. On page 604, Dec. No., Chas. Kingsley says such is repeatedly the case, and you certify to it.

Now for the "more yet" that friend Roe is ready to hear. On page 536, Nov. No., he says: "I gave a frame of eggs and brood from another colony, all worker comb, on which they started several queen-cells, capped about 50 cells as drones, and the rest as workers. The drone-cells were scattered broadcast over the comb." On page 605, Dec. No., he says, speaking of the same experiment, "I saw some of the drones crawl out of the cells, and examination proved the others to contain drones also." I don't doubt a word that Mr. Roe says, but he doesn't say enough. Experiments, to be valuable and conclusive, must not be fragmentary. Before he can claim to have proven that a queen's eggs can be changed from worker eggs so as to hatch drones, he must first state positively, from a careful examination, that those fifty cells were every one occupied by an egg at the time he inserted the comb. If they are not occupied at that time, the natural inference is, that they are supplied by laying workers. If they do contain eggs when he inserts the comb, he must state, from frequent examinations, that they or their larvæ do not at any time *disappear*, that these same 50 cells were at no time *duplicated* by the workers, and the original destroyed. Then, if drones come forth, he has a strong case.

I will now indicate what I think will be necessary to prove, that the workers can change the sex of eggs. First, a long strip must be taken from a comb of worker-cells, every one of which is occupied by an egg or larva. Secondly, the experimenter must be very careful to know that every cell is *continuously* occupied by the original product. Thirdly, they must be seen to hatch drones. Fourthly, they must be of the same race as the queen, but of a different race from the bees among which they hatch. And finally, no drones must appear on the remainder of the comb left with the queen. Whoever narrates an experiment fulfilling all these conditions will have good reasons for claiming that the workers can change the sex of a queen's egg. In future communications on this subject, it is to be hoped that the brethren will give full details, as this is what gives a scientific value to observations and experiments.

J. S. HUGHES.

Mt. Zion, Ill., Dec. 18, 1882.

Seems to me you are drawing the lines a little too close, friend H. If we put a frame of worker eggs, laid by an Italian queen, into a queenless colony of blacks, and find that it hatches Italian drones, is not that enough? Of course, we want to show that the eggs would not have produced drones, if left undisturbed in the parent hive; but if the eggs were laid by a queen only a month or two old, would not that fix that part? I know how prone the "Cyps" are to have laying workers, but such drones *must* hatch later. Don't you see?

MAKING THE BEES WEAR SHIRTS.

ANOTHER OF FRIEND HASTY'S FANCIES.

HAVEN'T they been without any thing on long enough? Dark ages indeed, when our pets have to go naked! "I don't like to associate with men who haven't any shirts," said an African savage, in making a little speech to the missionaries. They had recently taught him to wear the garment in question. And, friend Root, if a lot of your high-toned Italians should take a notion to come, and visit my black and hybrid aristocrats, how it would take them aback to have the proud natives aforesaid turn up their little honey-snouts and say, "We don't like to associate with bees that haven't any shirts."

On the whole, I might as well confess that I have not got as far yet as to make each individual bee wear a shirt; but the colony in its collective capacity wears one. The shirt is a substitute for the upper story of the hive. It is a recent invention of mine, but I am so very much pleased with it that I think it has come to stay clear to the end of the show. You remember that the elder Grimm was very emphatic about having the covers of the hive raised during a yield of honey, asserting that he got a great deal more honey by so doing. Well, raised covers are liable to let a storm beat in sometimes, and liable to be neglected until robbing breaks out, I should say. And I'll warrant that nine-tenths of us neglect to raise the covers at all, and so lose whatever is to be lost in that way, probably a large amount. Perfect super ventilation is assured by using a shirt instead of an upper story to cover the sections; and no evil results follow, as far as I see yet. Just lay across the brood-frames two quarter-inch strips, and set on the sections, either in broad frames, racks, or in any other way imaginable. Whether the super fixings are of a size to fit that particular hive or not, doesn't make a "dit o' bifference;" the neat muslin shirt, like charity, covers all. A roof, surmounted by a good-sized stone, is to be placed on top of all, of course. In making the first trials I wondered whether the bees would eat holes in the muslin, or propolize it. They never do either one. Where the fabric is pressed directly upon some chink close to where they are working, they propolize, but do not make holes. Before putting on the shirt I take care that the sections are sufficiently sided up with something, that no very large holes exist; and this, with what restraint is put upon the air by filtering it through a thickness of muslin, seems to be just inclosure enough.

I am aware that one might reason in this way: Letting air more directly into the sections will cool them; and if cooler, the scales of wax will not be workable, and comb-building will stop. But all theoretical points have to go by the board when actual practice contradicts them. Comb can be built when the air immediately surrounding the cluster is quite cool. Of course, a novelty must undergo a longer test (and a more general one) than this has had before being accepted by the fraternity at large.

Now as to the way of making and putting on the garment. Permit me to give the way I intend to put them on next season, instead of the way I put them on last season. Get the cheapest muslin, costing about 6¼ cents a yard. There is a kind which is tolerably heavy, but freckled with brown spots, which is most desirable if you can find it. With the aid of a sewing-machine make the material up into large tubes somewhat like shirt-bodies. Let the width of each be a little more than enough to go around your largest super, and the height several inches more than the height of the supers, when tiered up as high as you expect to tier them. You want now some thin wooden strips. If none are at hand, rip up some lath on the foot-power saw, making strips say ¼ inch thick. Take four pieces, the same length as the four sides of your hive, and with a few wire nails and the strips fasten the lower end of the cloth tube, or shirt, securely over the top edge of the lower story. In use, the surplus length of the shirt is to be folded over the top of the super, and held there by the weight of the roof. When desirable to look in, just take off the roof and let the upper end of the shirt drop down.

Besides the main advantage hoped for, of increasing the honey crop, the sections are easier to get at than in many upper-story arrangements. You can also adopt any new and desirable thing in supers or sections that comes along, without changing your hive. By means of this device I intend next season to put pound sections on a good many hives that were made for 1½-pound sections—the demand for the smaller size being so much the greater.

As to the durability of muslin exposed to the weather, I have had a pretty good illustration. In the fall of 1879 I made some saw-dust cushions directly upon the outside of the hives. I didn't think them of much use, but have left some of them on ever since, to test the weathering qualities of cotton. I believe none of them have given way, except where something was banked up against them at the bottom, in such a way as to hold wet.

It just seems to me that I can catch a good glimpse of the coming hive. A bottom, smooth on one side for summer, and made into a sawdust tray on the other side for winter. A one-story chaff-packed body, sized to suit one's frame, and wide enough to cut all the capers that come along inside of it. A flat roof, chaff-packed also, and clad with a big sheet of tin; a light narrow rim to inclose the folded cushion of chaff in winter, and a shirt to cover the supers in summer.

CRITICISING.

It is changing the subject a good way, but it's a matter I've been thinking of, of late—the way we junior class of bee-folks have of pitching into friend Heddon and friend Doolittle, and other seniors whenever our experience does not just tally with theirs. It must seem to them at times that this is a rather hostile world. Now, we don't mean it in that way. We are just as proud of them as need to be, all the time. They are suffering from "that fierce light that beats about a throne." Perhaps, however, we would seem a little less like a troop of boys throwing half-bricks, if we should contrive to say a kindly word now and then. To practice as well as preach, I have been much pleased by the quality of the plants I got from friend Doolittle; much larger and nicer ones than those obtained from a leading nurseryman of high repute.

LAST MONTH'S QUESTIONS.

I was too nearly out of thin foundation to spare enough to fill a super with full-sized pieces when I tried the sections without separators. Remember, I did not give my experience as an exhaustive set of experiments, but only as a series of dodges to get out of a corner. I have, however, repeatedly had bees work on one side of the foundation in a section until it was curled around almost far enough to touch the tin. The result in case no tin was there might easily be imagined. Besides, our customers will eventually get sharp enough to object to honey built on foundation. Natural comb is almost invisible when bathed in white honey; but the bright yellow of thin foundation is far too conspicuous to look nice, when cut on the tea-table. Foundation has also an unpleasant taste of its own, different from virgin wax. This taste is easily detected in the honey, when once one's attention is called to it.

E. E. HASTY.

Richards, Lucas Co., O., Dec. 13, 1882.

Why, friend H., you are going back to old matters that have been dropped and settled. Nobody nowadays sees any difference between natural honey and that built on fdn. I am afraid your "shirts" won't look well, will they? Won't they look "shift"-less.

MARKETING HONEY.

HOW OUR FRIEND DAN WHITE DOES IT.

FRIEND ROOT wants to know where I put so much honey, and asks several questions, which I will answer after telling my success getting customers to buy honey. The first season I got any quantity of extracted honey, the trouble seemed to be to sell it, although I offered it at 10 cents a pound, and a first-class article of thick ripe honey too. Nearly everybody would say, "I should like some comb honey, but don't like strained honey." It seemed to be the general opinion, that I had come the Yankee on it by adulterating it with something; at least they were afraid of the stuff. But I had the honey, and it must be sold some way; and when out with horses and wagon, sometimes ten miles from home, I would stop at every house and make a sale if possible, even if not more than one pound. If this could not be done, which was frequently the case, they would not object to my filling a saucer and giving them some, which I would not fail to do. Well, I overdid the business; for long after the honey was all gone they kept on coming from far and near with pails and crocks after more of that *dreadful* strained honey. You know we all have more or less friends and company come a visiting, and I believe this caused me to overdo the business. So you see honey seems to agree with visitors; and if there is any in the house they get a lick at it. They would, of course, say, "What beautiful honey!" "Where did you get it?" "What did it cost?"

"Got it of Dan White for ten cents a pound."

"Well, I do declare! I will send Joshua after two or three dollars' worth to-morrow;" and if Joshua bolted, as I often think he did, Jane Ann would hitch the old mare to the buggy and come herself. Lots of "Jane Anns" came this season when I was extracting; and when I assisted them out of the carriage, I would almost stick fast to them, and nothing could amuse me more than to see them eat cappings. They would go away "too sweet to mention."

My this season's crop of 8000 lbs. of extracted honey was disposed of as follows: shipped to friend Root and others by rail, 1100 lbs.; sold, to put in grocery stores to retail, 600 lbs.; sent a man on the road 6 days, and he disposed of 1880 lbs.; 3420 lbs. has been taken away by customers who came to the door after it, with the exception of probably 500 lbs. which I received orders for, and delivered, mostly in the village. I got 11 cents a pound for all except 50-pound lots and upward, which brought 10 cents; and I now have on hand, at a low estimate, 1000 lbs. in L. frames, laid away to feed, if needed, next spring.

I don't propose to be caught as I was last spring with hives running over with bees, and nothing to feed them except sugar. I bought and fed daily, as you would sheep and cattle. Last spring, when white clover first gave honey, I actually believe there was not 100 lbs. of sweet in my whole 80 colonies.

Now, if I would add to my other report 30 lbs. to each colony left for wintering, 120 colonies would show that my 80 colonies made not far from 11,600 pounds.

I weighed what I extracted from one of my strongest working colonies; it gave 213 lbs., and I think I had several that did equally well. The 400 lbs. of comb honey (my share of the 10 colonies), I took charge of away from home; sold for 18 cents a pound, all but about 80 lbs; that, Julia took charge of. Come and see us, and I presume you will see a chunk of it on the table—extracted too; take your choice. The forty 4-frame nuclei brought $4.00 each; the fifty-two 3-frame nuclei $3.00 each; 57 queens brought me $62.00.

Now I have gone on and told you all about the honey on hand laid away for the bees, so I will say I have two dogs, and they *will* b——ark!

New London, O., Dec. 11, 1882. DAN WHITE.

Many thanks, friend W., for standing up and "speaking your little piece" so well; but you did not tell us who "Julia" was. We know Daisy and Bertha; is she any relation to them? And is she a "bee-woman"? I believe heartily in your plan of working up a home market.

DOOLITTLE'S NEIGHBORHOOD.

BY ONE OF HIS NEIGHBORS.

I COMMENCED keeping bees in 1878, with three colonies; in 1881 my spring count was 7 colonies; one of them had about one gill of bees, and one queenless. I doubled the two, which made me 6 colonies, and not very strong; increased to 13; made and sold 1100 lbs.; went into winter quarters with 13 colonies; spring count, 1882, 13 colonies; lost none through the winter. The season of 1882, up to July 4, was very poor, for at that date starvation was upon them. On the 10th of July they went to work and found sustenance enough to feed themselves until the 18th, when basswood came into bloom, and from that date for 16 days they made 1310 lbs., which I sold, and increased my stock to 25 colonies, with which I go into winter quarters, with an abundance to winter upon. The season has been to me all that I could ask for. I reside about 2½ miles from G. M. Doolittle, and with the same production for honey range, and I can not agree with him that this has been a poor year, or that the basswood product lasted for only 7 days; for with me it lasted 16 days, and from that source I made all of my honey (despite what A. A. Fradenburg may say in the premises). There are others in this section who make bee-keeping pay, Mr. Editor, equally as well as Mr. Doolittle, and have just as good stock, etc., as he has; but when our favorite basswood, to which we owe our success, is belittled, as to its honey-producing qualities, and the idea is advanced that it is the *man* that makes the success, it is time that some of his neighbors, who do not aspire to newspaper notoriety, and who say God speed bee culture, have a word to say in the matter.

If I mistake not, you will receive more communications from this section, and from those who are satisfied that the year 1882 was one of productiveness, and to them all that could be asked for. My statement here sent is true, and can be vouched for in every particular. Henry Wirth.

Borodino, N. Y., Dec. 9, 1882.

Gently, friend W. We are very glad to have you speak out, and even enter your protest against its being called a poor season; but for all that, I think you hardly take in consideration that friend D. speaks comparatively, when he called the season a poor one. You call a hundred lbs. to a colony a good season; well, I guess the most of us do too; but there are a great many now who go far beyond that with a few colonies, as you have.—In regard to superior strains of bees, I am inclined to think Italians in one apiary will gather about as much as the Italians in another, other things being equal. Many of the reports of late would seem to indicate that a dash of black blood might, if anything, make them do a little better, especially on comb honey.

HOW TO PRESERVE OUR BEE JOURNALS.

HOME-MADE BOOK-BINDING.

I HAVE not seen any good, easy, cheap, and durable way published yet, telling us how to bind our journals to preserve them, unless we get a binder. Friend Hasty recommends a paper of wire nails and a hammer; but I fail to see the preserving influence he claims in the nails and hammer, but I do not dispute his seeing it. I have bound Gleanings for 4 years, and I will give the plan. I have a thin board, cut just 9½ inches long and 6¼ in. wide. On one side, just ⅞ in. from each end, a small notch is cut, and another in the center between the two. To use this board I take a copy of Gleanings, open it in the middle, right side up on a board or bench; place the board on the right-hand half of the copy, with the notched side to the center, and with the upper notch just even with the line above the reading-matter; then with an awl I make a mark at each notch in the board; remove the board and punch a hole through the leaves at each notch, being sure to punch where the leaves fold. I then put a pin through each outside hole, shut up the copy with the front cover up, and put on the board just as I did before, with each outside notch even with the pins, and the edge of the board even with the back of the copy; then with a sharp knife I trim the copy even with the board all around. I then make 3 good strong strings about 6 in. long, from good flax shoe-thread, and loops from the same. To make the loops I first make a long string, then I drive two 1-inch wire nails into the edge of a board just 7⅞ in. apart. I wrap one end of the string around both once, and tie, cut it off, and repeat as many times as I have copies to bind. Now, to bind I take the Jan. number, open it in the middle, right side up, and with a crochet needle I draw a loop through the upper hole from the *inside;* tie one of the short strings fast to it, and draw it back; draw the other end of the loop through the lower hole, and tie another short string to it, and draw it back; draw the other short string through the middle hole from the *outside* over the loop-string; back and tie. I then lay the copy with front cover down, with the strings to my right; take up the Feb. number, and proceed as before, only I draw the short strings through the loop without tying. I keep the short strings drawn as tightly as their strength will admit; and when all are done I draw the strings all tight and fasten the ends. The strings must be very strong, and well twisted, more especially the short ones, and the short ones should be 4-ply; the loops 2-ply. If covers are desired, the short strings must be left an inch or two long on each side, to hold them; this may be done by untwisting the string and pasting it on the inside of the cover, and pasting a sheet of paper over them to hold them firmly. I put covers on Vol. VII. of Gleanings, but put none on the other three. I aim to take good care of them, and by so doing they do not necessarily need covers. I have the volumes indexed to suit my own fancy; and by this index I can turn to and read up all that has been published on a great number of the main questions, such as wintering, ventilation, candy for queen-cages, etc., on short notice. I should have said, in the proper place, that the copies can be bound and trimmed afterward, just as well as to trim them separately, but I have followed the plan given above.

New Point, Ind., Dec. 11, 1882. T. J. Cook.

The above, if I understand it, produces something almost exactly like regular book-binding; and if good strong twine is used, we have a flexible binding that leaves the book free to open, even out flat; and at the same time it is so strong as to stand years of hard usage. Almost all other ways of binding periodicals make the book stiff, and unhandy to open. Where one has plenty of time, and I believe most of our bee friends have during winters and winter evenings, this method may be quite valuable, and we tender thanks to friend Cook for having described the whole process so minutely.

WILL QUEENS HATCH IN LESS THAN 16 DAYS FROM THE EGG?

SOME VALUABLE FACTS THAT THROW NEW LIGHT ON THE MATTER.

YES: but not much less, as the following will prove. Early in June, 1881, I chose a frame of foundation, partially drawn the fall before, and inserted it in my best stock at eight o'clock in the morning. It was a twelve-frame hive, full of brood and honey. I found the queen, and placed the frame containing her, second from the outside, and set the new frame between her and the center of the brood. I had found, that by so doing I could get her to lay in a frame in a few hours. In just three days I inserted this frame in a queenless stock containing no brood. None of the eggs had yet hatched. They built seven nice large cells. In exactly fifteen days from the time the frame was placed with the queen, just before starting to my school in the morning I examined these cells carefully, but could see none of the queens moving by holding them between me and the sun, nor hear them gnawing. I dismissed school at four o'clock, to hurry home and find my cells hatching — one queen free in the hive, two at the entrance dying, and two gnawing out, which hatched before six o'clock. This was a few minutes before five. The two remaining cells I gave to a neighbor, who reported that they hatched next day. This proves that queens hatch in *less* than sixteen days, but not how *much* less. It now remains to be shown, that it generally requires at least 15 days. Ever since August, 1878, I have raised nearly all my own and my neighbors' queens by the transposition process. I have found by experiment, that larvæ make their appearance very soon after three days from the egg, and that in a few hours afterward they are large enough to be removed and inserted in queen-cells. If you were to ask some of my neighbors if I had raised as many as a thousand in this way, using these very small grubs, they would probably "smile" I had. I can also prove by the same witnesses, that these grafted cells *invariably* hatch right at *twelve* days from the time of grafting. Now add these twelve days to three days and a few hours, and you will have something reliable. As a further proof, I will add that I frequently delay distributing these cells till the twelve days are up, but that, in such cases, I find them all out in less than an hour. Frequently they crawl out while handling the cells.

Now to account for queens that appear so very much less than fifteen days: The present season I had a colony of Cyprians swarm three times. Second-swarms at this time rarely contained less than a dozen queens, and frequently as many as eighteen to twenty. After the last swarm had been hived, using four frames of brood from the stock, destroying quite a number of cells thereon, I proceeded to destroy all the remaining cells but one, counting them as I went along. I found 110 ripe cells on 12 frames, 50 of which were gnawing out; and such as happened to get away from me could generally fly with all ease. Just behind this stock was a similar one that had swarmed daily for several days. As I approached it to remove the cells a neighbor came into the yard, and we both observed young queens coming and going from the entrance continually. The bees were worrying them, and they were evidently seeking safety in flight. Further observation during the season showed this to be a common occurrence. While things were in this state I started queen-cells in four stocks the same day. I examined them daily for five days, and found them all building cells satisfactorily. The next day was Sunday. Monday in the afternoon I found three of them with virgin queens of a different race from the eggs given them. All three were *dark* Cyprians, while the eggs were from a queen that produces the *brightest* queens I ever saw, and never *dark* ones. This was my first experience of the kind, but it frequently happened afterward, to my great annoyance. Now bear in mind, that I have shown that queens can fly as soon as out of the cell; that the bees frequently worry them, and cause them to seek safety in flight; that virgin queens often enter queenless stocks and destroy the cells, and are accepted, and you will have no difficulty in explaining where friend Pond's queen came from that he thinks hatched in 10 or 11 days from the egg (see p. 545, Nov. No.). I am very certain, that if he could have the same experience that I have had the past summer, he would not think of any other solution than the one I have indicated. J. S. HUGHES.

Mt. Zion, Ill., Dec. 8, 1882.

You have given us some very valuable facts, friend H.; and from the experience I have had, I can not help thinking you are right. Young queens get into hives oftener than we think, and sometimes we never suspect the state of affairs until we find a laying queen where we thought we had only a cell or a virgin queen. It is this sort of work that makes so many misunderstandings and uncharitable thoughts toward those who sell queens oftentimes. Another thing the above experience brings to light: The wonderful prolificness of the new races of bees brought us by friend Jones. Why! with one such colony as friend Hughes mentions, made to swarm early in the season, it would be no difficult matter to increase to 100 stocks in one single season; and with a good locality they might gather a ton of honey besides. Before you pronounce me beside myself, take a look at the reports of 1882. Are these queens not good ones? While we are on the subject I may remark, that it still seems fashionable to write "essays" on dollar queens. Go on with your essays, friends, if you choose; but meanwhile, note that the stunning reports, the great mass of them, were from bees reared from these same dollar queens. Friend Atchley's, of last year, friend Carroll's of this year, friend McKee's, on p. 582 Dec. No., and friend Malone's wonderful yield of honey given in our Dec. No., p. 591, were all from the progeny of queens bought of us at a low price. Now, after reading these essays it is really funny to think we have hardly a report of any thing to speak of, from a queen that cost $3.00, $5.00, or even *ten* dollars. Do you say it is the high-priced queens that furnish the progeny for this valuable stock? Exactly; and the men who rear dollar queens are the ones who purchase the best queens to be found in the world, regardless of price; for it is as easy to rear from them as any other, *especially* when we can get a hundred cells from a colony, as friend Hughes has mentioned.

HOW I WOULD BUILD A HONEY-HOUSE.

FRIEND DOOLITTLE GIVES US SOME ADVICE ON THE MATTER.

I AM requested to tell in GLEANINGS, how I would build a honey-house, and I see on page 615, of GLEANINGS for Dec., that E. T. Flanagan desires a plan for building a house for both comb and extracted honey. In the first place I would say, that I should not want extracted and comb honey, and the necessary work for each, done all in one room. My experience says, have a room for comb honey, one for extracted, and a third room large enough to do all the general work for both. Now, any building can be cheaply lined so as to exclude bees, with half-inch stuff, for this general workroom, and the storage-rooms be built on the south side so as to make them convenient, airy, strong, and sufficiently warm to ripen honey thoroughly. If I were building a shop I should build it so that I could partition off these two storage-rooms, one on the southwest and the other on the southeast corner of the same, having the body of the shop for doing work of all kinds pertaining to the apiary. I should build it two stories, and use the upper story for storing every thing not in use, or liable to be used for some little time. If I did not wish to build a shop, I should use any old building I had, lining it and fixing as in the case first given for a room for this general work, for such a room is certainly necessary. It would be *preferable* to have this general room mouse and rat proof; but if an old building is used it could hardly be expected, without quite an outlay. The two rooms used for storing honey I would have mouse-proof, let it cost what it would, for the filth of vermin about honey is not to be tolerated at all. If mice get into the general room, keep them caught out with traps; and as for the rats, they will not be liable to bother unless you have grain of some kind in your room for them to feed upon, and this, of course, you will not tolerate, for this general room is for bee-fixtures and not for grain.

Having given a little outline of what I would have for a general work-room, I will next speak of a room for storing comb honey. This need not be larger than 8x10 for storing all the comb honey from 100 stocks in the spring, even should they produce 200 lbs. per swarm on an average. Whether built in with a shop, or at the side of another building, I should have a wall of mason-work for the sills to rest upon, if drainage could be obtained so the water would not stand under the wall, as in such a case the freezing of the water about the wall would soon destroy it. If I could not dispose of the water I would use abutments. The wall, or abutments, need not be more than a foot high; and if a wall, two or four six-inch square holes should be left at the sides so the air can freely circulate under the floor. If a wall is used, 6x8 inch would be plenty large for the sills, and 8x10 in any case; for you will see that the abutments, if such are used, are close together, not more than 3 feet apart. For sleepers I should use 2x8 inch, and place them but 8 in. apart from center to center, having them run the shortest way of the room. Now, don't think this too strong, and place these sleepers further apart; for if you do you will repent when you get from 5 to 10 tons of honey in your room. I would have the room 9 feet high, so the studding (2x6 inches) should be that length less your plates (4x6 inches), if you build this room separate from your shop. If so built I would have a tin roof, and paint it a dark color; but if in a shop, of course no roof will be needed, as the upper floor will make the roof.

So far I would use good hemlock for the wood employed, for this holds a nail well, is strong, and does not easily decay. For the floor I would use 1¼ matched spruce 4 inches wide, and inch pine common ceiling for the sides. If all is put together as it should be, you will not be bothered with mice, providing you keep the door to this room shut when not in use. This door is to be on the side next your general room, of course. I would have a window on one side and one end, which are to be opened in warm dry weather, so as to thoroughly ventilate the room and pile of honey. Over these windows, on the outside, is to be placed wire cloth so the windows can be left open at pleasure without any fears of robber bees. To let the bees out, which may chance to come in on the honey as it is taken from the hive, let this wire cloth run 8 or 10 inches above the top of the window, nailing on strips of lath, or other strips, ⅜ thick, so as to keep the wire cloth out that far from the sides of the building, thus giving space for the bees to crawl up on the cloth to the top when they are on the outside. No robber bee will ever think of trying to get in at this entrance, so your room is kept clean of bees and flies all the while. This completes the building, I believe, except that we want it painted some dark color so that the rays of the sun may keep it as warm as possible. Our door should be in the center of one side, so that on each side of our room a platform can be built, upon which to place our honey. Perhaps all will not agree with me, but I think all box honey should be stored in such a room at least a month before crating, to ripen and sweat out. I know it is a saving of time and labor to crate it at once; but I think it pays for all this extra time and labor, in the better quality and appearance of our product. For the platform I take pieces of 2x12 plank, and cut them 3 ft. 9 in. long, and spike two pieces together, thus making a stick 4x12x3 ft. 9, using three of these on a side, set the 12-way up, which leaves an alley 2½ ft. through the center of the room. Upon these lay four 3x4 sticks, 8 ft. long (4 on each side). Now lay sticks 2x2x3 ft. 9 across these so your sections will stand on them the same as they did in the hive, and have the ends of the sections meet in the center of these 2x2 sticks. Also by means of strips keep the honey out two inches from the side of the building, so that the air can circulate all around the pile, otherwise that next the sides of the building will sweat so as to become transparent. Also, piled in this way the fumes of burning sulphur can penetrate the whole pile by placing your burning sulphur under the pile.

The room for the extracted honey, I would build of the same width, except that I would have it 14 to 18 feet long instead of 10, so as to give plenty of room. The reason we have our comb-honey room small, is, that we can sulphur our honey in as small a room as possible. I would build both rooms as one, so as to save material, and separate them by a partition so made that the sulphur smoke could not get through. You can store your extracted honey in tin-lined vats made to suit you, in barrels, kegs, or in the 300-lb. tin cans sold by A. I. Root, as preferred. In fact, fix up the inside of this to suit you, as probably nearly all will have their own way. I prefer the A. I. Root cans for storing honey, and the Novice extractor. By placing a cloth over the top of these cans, the honey ripens nicely in this warm room, even if the combs are not fully sealed when extracted.

With a description of how I store my combs, which are used for extracting purposes, I will close this already too long article. As you are building your honey-room, have the studding on one side set just as far apart as the top-bar of your frame is long; not from center to center of studding, but leave that space between each. Now nail strips of ⅝ stuff, 2½ feet long by 5 inches wide to these studding, letting them stand out into the room in a horizontal position. Let the distance between each strip from top to top be 1 inch greater than the depth of your frame, so as to give sufficient room to manipulate the frames handily. Three inches from the ends of these strips run a partition clear across the room, which is to have close-fitting, narrow doors placed in it, spaced so as to be most convenient. Now hang in your combs; see that all combs not in use are in their place, and not lying about somewhere else. As often as any signs of worms are found, put in a pot of burning sulphur; close the doors, and the work is done. In all this work with burning sulphur, make certain that nothing can by any means take fire from it before you place the fire to the sulphur, for a room full of sulphur fumes is a bad place to go to, to put out a fire.

Borodino, N. Y., Dec., 1882. G. M. DOOLITTLE.

Inasmuch as friend D. has been not only one of the largest producers, but also one who has produced some of the finest comb honey, we are very glad to get the above valuable hints in regard to making a honey-house. His remarks are the more valuable, as they apply to the construction of a honey-house on any plan, or even the fixing-over of some building our friends may have already in use. A handy and convenient room for honey, and one that will help to reduce the whole matter of handling the crop to a regular system, will be a most valuable adjunct to the whole business. False motions, and moving a crop here and there, without gaining any thing, is one of the sad leaks in any crop; and when we add to it, having the crops injured by moth worms or mice, just because of the lack of a convenient room, we can begin to estimate the value of such a building as he describes. Let us have more suggestions on the matter.

PLAN OF A TWO-STORY OCTAGON HONEY-HOUSE.

SOME GOOD IDEAS IN MAKING BUILDINGS OF ANY KIND.

THIS is a permanent building, plain but tasty, fire-proof and frost-proof, rat and mouse proof, bee and moth proof, well lighted and ventilated, cool in summer and warm in winter, easily heated by stoves, furnace, or steam, as most convenient; the temperature easily regulated, commodious and compact, simple in construction, cheap and durable. It may have a basement or cellar, if any wish to winter bees in that way; and this cellar, being perfectly dry, will serve for storing lumber, hives, etc. The main story will afford convenient space for nailing up hives, frames, and sections, making fdn., extracting honey, putting up honey for market, etc.; also abundance of room for storing spare frames in handy receptacles. In the upper room spare hives may be stored, painting done, all small stores and supplies suitable arranged and kept, samples of honey in comb and in jars or pails displayed. An observatory-hive at each window will furnish entertainment and instruction,—a great attraction to visitors and customers.

FORM OF BUILDING.

The first point of excellence to be noticed in this plan is the form of building. We build walls to inclose space, and to sustain floors and roofs. A wall one foot thick and one hundred feet long, or two walls of fifty feet each, placed side by side, will inclose no space; but if arranged in a rectangular form, say 10 ft. by 40, the whole space occupied will be 400 square feet, one-fourth being covered by the wall itself. The same amount of wall in a square 25x25, contains 625 square feet. The hexagon of 16⅔ ft. sides has about 700 ft. contents; the octagon of 12½ ft. side has 744 ft., and so on, increasing the contents with the number of sides until we come to the circle, which contains most of all. This shows one reason for preferring the octagon to other forms, since we get one-fifth more room than in the square, with the same amount of wall. The space is better adapted for entrance and communication and light and fixtures, and inside arrangements generally; the floor and roof timbers are better sustained, and they better anchor the walls. The octagon has as many angles as it is profitable to have; it is symmetrical and stylish, superior to the circular or rectangular form. If any one should prefer the hexagon or other form, by this mode of building, one can be put up as easily as another, as will be seen by considering the nature of the material used in construction.

MATERIAL.

The material is lime, sand, and water. It is known as "grout," or "concrete," or the "gravel-wall." If coarse sand, gravel, and stones are mixed in, less lime is wanted. The lime is to be slacked and mixed well with much water, and sand which needs no screening added and worked rather thinner than common mortar; gravel and stones are then thrown in, well wet down and thoroughly mixed. After the composite thus prepared is deposited in the wall, more stones are thrown in. Any rough fragments or smooth pebbles, brickbats, cinders from furnace or forge, slag, or refuse from glassworks, broken tiles, or pottery or glass, oyster-shells, and even Medina clay, if well baked in the sun, will do to fill up. It will pay to dig some distance into some hillside or go several miles for materials. Any brick-kiln will furnish cartloads of just the right sort of stuff, all the rubbish and even the brick dust being available. In fact, suitable materials can be got almost anywhere, and this kind of wall can be put up for about *one-fourth* the cost of wooden walls, and *one-sixth* the cost of brick or stone work. This great saving of expense is partly due to the material, and partly to the method of putting up. The high wages of mason and brick-layer and carpenter are wholly saved, and most of the work is done for what it costs to tend mason. Not so much lime is needed as for the brick-house; the stones, sand, and gravel cost only the expense of hauling. That part of the wall which is below ground should be built with water-lime or cement. Floors, roofs, doors, windows, etc., cost no more than for any other style of building, perhaps not so much. For foundation walls this is the handiest, cheapest, and most enduring substance, whatever we may choose to build upon it. The mason who laid those costly and very handsome walls of brick and stone a little west of the "Home of the Honey-bees," when he came to set the posts for the porches, he and "Sam" just dug some holes in the clay, a few feet deep, mixed up the cement and sand, dumped it into the holes, threw in any rough stones that lay around, and very speedily had some firm and lasting foundations that are much harder than the stone posts set upon them. Seeing which simple and rapid way of accomplishing a good result, I wondered if that man knew he could build whole foundations just as easily and swiftly, and carry up walls also as high and as strong as necessary for any purpose whatever, free from damp when once dry, which stone and brick walls can never be; more easily molded to any shape required, and capable of as much ornament and embellishment as those, and growing better with lapse of time, instead of needing troublesome and costly repairs by and by. Perhaps the mason knew all about this matter, and perhaps not. He did in a workmanlike manner the job that was intrusted to him. Many of our best masons and carpenters disapprove of this style of building, for it is out of their line;

and those who have occasion to erect buildings are usually constrained to have the work done as the builders think best, and perhaps lack the courage to have any thing done out of the common, lest the neighbors should smile or frown on their folly. It is difficult to assign any other reason why this wonderfully excellent style does not more prevail. Bee-keepers are progressive men, and those who hesitate to put up those expensive and unsatisfactory structures of wood, stone, or brick, may perhaps be willing to look into this matter and give this method a fair trial. It is not here set forth as wholly novel or original, as the gravel wall has been used in some parts of the country for thirty or forty years, and the octagon form well developed during a shorter period. The whole process has been carefully studied and *worked* out; and the writer of this paper is prepared to furnish to bee-men on application, at small expense, complete drawings and specifications, so that any common-sense man can put the thing up in a few weeks if he has two or three stout men to shovel and wheel his material. Cost of lumber, lime, and other things, will vary; but the relative expense will be the same, or nearly so, everywhere. So one can figure up at once and count the cost, and can secure a nice cosy place in which he can do his work and keep his wares, and wonder that so little outlay should go so far.

METHOD OF CONSTRUCTION.

Many important details must here be omitted, but can be furnished in full to those wishing to build. For foundation, dig a trench three or four feet, to avoid frost; a foot wide or less will do, if not so difficult to dig; of course, the thicker this wall is, the more material is required. Above ground the material is shoveled into boxes or troughs made of boards a foot or more in width, set up on edge where the outside and inside of the wall is to be, eight of those the length of the wall outside, and eight shorter inside. These are properly braced so as not to spread, and the mixture soon becomes dry enough to stand alone, and the boards are set up on top, and another course in same manner.

Here are some figures for those who have not given much attention to this subject: To every bushel of unslacked lime, provide twenty bushels of sand and other materials. Sand and lime alone will do, but will require larger proportion of lime, and take much longer to set. It will be safe to reckon the bushel as a cubic foot, and these are the contents of an octagon of 10 ft:—

Foundation wall, 80 ft. round, 3½ ft. high,	280 cu. ft.
Main story, 80 ft. round, 9 ft. high, and 8 in. thick (less door and windows),	450 " "
Upper story, 80 ft., 8 ft. high, 6 in. thick, deducting space of four windows,	300 " "
Central shaft, or chimney, 2 ft. sq.,	100 " "
(If basement is wanted, make contents of wall 500 cu. ft.)	
Floor (either basement or main floor),	200 " "
Total solid feet, or bushels,	1330 cu. ft.
of which 1-20 is lime, say 70 bushels.	
Floor timbers, 2x8,	260 ft. in length.
Rafters, 2x8,	400 ft. in length.

Floor about 500 feet surface, roof about 700, planed and matched, *no ceiling*, roof tinned; chimney carried well above the roof, surmounted by a ventilator and weather-vane in form of a "golden queen-bee." If the sides be longer, one story will give plenty of room, and save expense of one floor, stairs, and windows; the concrete floor only being needed. The building, however, would look rather low, while the two-story would be far more sightly, and the chimney being higher would have better draft. Still, there are many advantages in the one story, and I am pretty sure I should build mine so; and by a cupola and rather high chimney, and perhaps steeper roof, redeem in some degree the defect above named.

I have had some knowledge and experience in this method, but never have seen it applied to a honey-house. I shall be glad to advise with any one wishing to give it a fair trial. D. F. SAVAGE.

Medina, Ohio, Dec. 5, 1882.

Thanks for your suggestions, friend S. In many respects I should think it would be quite desirable to have a honey-house made of artificial stone, in the way that you suggest; but if I am correct, such structures have not met with very much favor in the years that have passed since they have been suggested. I do not know whether it is because they are more expensive than it would seem from the descriptions that have been given of the methods of making them, or whether it is because they are not dry or durable, or something of that kind. It would seem some different arrangement would be required for comb honey, if we are to ripen it by the heat of the sun, as friend Doolittle directs. Some years ago I was much taken up with the idea of making a building nearly round; but after building our house apiary on the hexagonal plan, my ardor has somewhat abated. Of course, we built all of lumber, and the extra work required to fit floors and roof, and working around the corners, was pretty expensive, compared to what would be required on ordinary rectangular buildings. Has anybody a cement or artificial building in use, such as friend Savage describes, and how does it please? Is the expense so much less than stone and brick buildings? Perhaps I should remark, that friend Savage has brought us some very fine drawings and diagrams, to illustrate his plan; but I hardly think it worth while to have them engraved before we have some further suggestions in regard to the matter.

Here are some more ideas about honey-houses:—

SUGGESTIONS IN REGARD TO A HONEY-HOUSE.

I write to give you a description of my contemplated plan for a honey-house, shop, extracting-room, and bee-cellar in one. Our repository for comb honey is a room 8 x 20 feet, with shelves 2 feet deep on two sides, 20 feet long, 10 inches apart, having sufficient room to store 8000 or 9000 lbs. of honey. There is a table between these cupboards, or repositories, 3 x 14 feet on top, 3½ ft. high. A stove is in the cellar, and a pipe connecting it with this room for fumigation; and if it is not desirable to smoke the whole room, the honey can be stacked over this pipe, and a tight-fitting box set over the whole. The table is for assorting and packing honey. This room occupies one-half of the building above the cellar. The other half is the shop or repository for extracted or sealed combs. This shop-room is also used for extracting. The brood-comb repository is composed of racks one foot apart, up and down, two feet deep, holding about 18 combs, or in all about 2000. The whole building is 20 x 24 ft., 13 ft. to rafters from the ground. The cellar is 4 ft. under ground, and 4 feet above ground. That below ground is cemented on bottom and sides right on the earth, being 16 x 20 ft. at bottom, and sloping to the surface; that above ground is frame, lined with brick, and cemented. A track runs from the apiary through the cellar. This I write in reply to friend Flanagan, p. 615, Dec. No.

I have about 20 stands of bees in double-walled hives, and 183 in cellar in Langstroth, all in good shape. My report for this year is about 5000 lbs., about half extracted and half comb, in 1½-lb. sections. If this description of a honey-house strikes your judgment as beneficial to any bee-keeper, you can publish it; if not, lay it tenderly in the basket.

Cedar Falls, Ia., Dec. 7, 1882. A. J. NORRIS.

We shall not lay it "tenderly" in the basket at all, friend N.; but, on the contrary, thank you for giving us a chance to lay it before our readers.

THAT HONEY-HOUSE.

In reply to E. T. Flanagan's inquiry on p. 615 of December number, I would say that I have a honey-house, and I consider it a very necessary thing in connection with bees. It stands in the middle of my apiary. It has a window on each of three sides, and a door on the other. The sills and plates are 4 x 4-inch oak, halved at the corners, and spiked together. It is sided up with pine boards one foot wide, planed on both sides, and battened. There are two ribs, 1 x 4-inch oak, between plate and sill, to nail the siding to. The floor is maple, covered with oil cloth. It is covered with a hip roof, shingles and tin, and is painted; scroll-work under the cornice. The house is painted inside and out. It is ceiled overhead 7 ft. from floor with boards, furnishing a place above to put cushions in summer; ventilated with screens in windows when necessary. It is furnished with a stand, lounge, chairs, and shelves. It is used for handling bees in, storing honey, and implements used about the apiary; also for entertaining bee-keeping visitors in, to talk up the subject.

A person keeping 200 swarms, I should think, would want a house 14 x 14 feet on the ground, and 10 feet to top of plate. F. C. WHITE.

Euclid, Cuy. Co., O., Dec. 6, 1882.

I like the idea of the chairs and lounge, friend W., for you can, after showing the visitors the honey and all the sights, set down with them and have a friendly chat; that is, when "biz" will reasonably permit.

REPORT FROM OLIVER FOSTER.

BEES, AND BUSINESS PERTAINING TO BEES.

NOV. 1, 1881, found me with 56 colonies and 2 nuclei, all packed on summer stands, except 3 colonies in cellar. Lost 1, sold 3, bought 9, and began '82 with 63, several of which were very weak. The spring was very cold and backward. Dwindling and starving were the order up to June 10th; but with a little sugar, and much watching, we "bridged the chasm." White clover yielded only enough to keep up breeding. From July 1st to 15th, basswood did fairly. Nothing then until about Aug. 15th, when darker honey came in slowly untill frost. I think this was from a kind of "smartweed" which grew in abundance in poorly attended cornfields, etc. As I was obliged to slight the honey interests to supply customers during the busy season, my report is not what it might have been.

Aside from my own apiary I took 17 very weak colonies in the spring to handle on shares for half the honey and half the increase, which gave me 195 lbs. comb honey and 4 colonies. Here are the figures for the season's work:—

	DR.	CR.
By 58 colonies in fall of '81, at $5.00		$290 00
By 9 colonies bought, - - -		50 00
By hives, sugar, and supplies in general, - - - - - -		152 27
By Adv'g, circulars, and postage,		25 31
By hired help, - - - -		35 36
To 135 colonies now at $5.00, - -	$675 00	
To bees sold, - - - - - -	29 50	$552 94
To queens sold, - - - - - -	86 30	
To 1460 lbs. section honey at 18 c.,	262 80	
To 2115 lbs. extr'd honey at 11.8 c.,	249 57	
To 800 extra L. combs, containing say 1 lb. honey each, at 30 c. per comb, - - - - - - -	240 00	
To 25 gall. honey vinegar at 20 c.,	5 00	
To 195 lbs. section honey from bees on shares, at 18 c., - - - -	35 10	
To net profits on fdn. machinery,	161 18	
To net profits on comb fdn., - -	59 20	
Received for other work, - -	30 70	
By net gain, - - - - - -		$1281 44
	$1834 38	$1834 38

Average honey per colony, spring count, 70 lbs.; average profit per colony in honey, queens, and bees, $16.63.

The 156 colonies, including 21 that I have on shares, have about 25 lbs. each for winter; 3 are in cellar (to keep frost out); 29 are in my old chaff hives; 14 are in house apiary, and 110 are in L. hives, packed in piles of 8 each. The latter method of wintering is the one I prefer. The honey is about half sold, at and near home, at the average price given.

OLIVER FOSTER, 63.

Mt. Vernon, Linn Co., Ia., Dec. 13, 1882.

So it seems, friend F., that you, besides doing a good business with your bees, also turn an honest penny making fdn. machines. Well, a great many are going to be wanted; for as wax gets scarce, a simple machine that can be used at home gets to be all the more desirable.

THE STATISTICAL TABLE.

AN EASY WAY TO GET IT, IF WE ALL TAKE HOLD AND HELP.

AT the last meeting of the North American Bee-Keepers' Society, a committee was appointed to obtain statistics relating to bee culture. Upon consultation the committee have decided to ask, through the various papers devoted to the interests of bee culture, for information directly from the bee-keepers themselves. Will you, therefore, please request each bee-keeper to report his name, postoffice, State, the number of colonies he had in the fall of 1881, the number in spring of 1882, the number in fall of 1882, the number of pounds of comb honey taken in 1882, the number of pounds extracted, and the number of pounds of beeswax? Let it be written on a postal card, like the following:—

F. Torrens, East Liberty, Pa.
21 colonies fall of 1881.
18 " spring of 1882.
25 " fall of 1882.
400 pounds of comb honey.
300 " extracted "
3 " beeswax.

No date is needed. Send the postal to "Dr. C. C. Miller, Marengo, Ill.," and as soon as they can be ob-

tained, the results will be given through the papers making this request. C. C. MILLER,
Chairman Statistical Com.
Marengo, Ill., Dec. 12, 1882.

There it is before you, friends, and now let us all take hold and send those cards in on friend Miller, in a perfect hailstorm. Here goes mine now, before I forget it. Will you not do the same?

Ladies' Department.

ALTHOUGH I can not give as big a report as some can who are engaged in keeping bees, I am satisfied with the result of the season's labor. I commenced last spring with 7 colonies of blacks. I bought 6 colonies, paying $10.00 for them. They were blacks also, and in old box hives. We transferred them to the Simplicity (I say we, for my husband helps me in transferring, extracting, etc.). I had one natural swarm, and made two by dividing, and I bought one swarm of a neighbor late in the season, paying 50 cts. for the bees, taking them from a tree, he keeping the honey; so you see I now have 17 colonies, 10 of them Italians, 6 hybrid, and one black, all in fair condition for winter. We have taken 1200 lbs. extracted honey, and 300 lbs. in Simplicity section boxes. Hive No. 10, which I call my "missionary hive," gave me 200 of those boxes.

I have found sale for the most of my extracted honey at 12½cts.; but the comb honey goes slowly at 20 cts. per box, owing to the superabundance of broken-up comb honey on the market.

The fore part of the season was very unfavorable for bees, being cold and wet. I put on the second story about the middle of June, and the queens took possession of them immediately. I at first tried to keep them below; but finding it difficult to do so, and that it took more time than I could afford, I just put on a third story, and let them go.

Well, Mr. Root, I suppose you have seen as large colonies of bees, but I never did before, and it beat all to see how they did work. While our neighbors' bees were swarming, ours were piling the honey in at such a rate that we had but little time to rest. I consider bee-keeping a pleasant and remunerative employment for ladies, but they must not be afraid of work, or bees either, if they would succeed. I think the Italian bees are much more inclined to rob than the black bee. I find the best way to stop robbing is to throw a cloth of some kind over the hive, letting it extend down in front sufficiently to darken the entrance. SARAH E. DUNCAN.
Lineville, Wayne Co., Iowa, November 13, 1882.

Thanks, my friend. I think a little more experience will change your views in regard to the Italians robbing. I am very glad to hear the "*missionary* hive" did so well.

HOW LONG DOES IT TAKE TO GET A LAYING QUEEN, ETC.

Will you give me a place in the Ladies' Department, and allow me to take part in some of the gentlemen's discussions? I noticed, in the Nov. No. of GLEANINGS, that Mr. Pond testifies that a queen can be hatched from the egg in less than 16 days; and again in the Dec. No., Mr. Eby states that he has had queens hatch the 14th, 15th, and 16th day after the colony became queenless, and I simply wish to give my experience in testimony to that fact.

Last March I ordered queens from Mr. Viallon, of Louisiana. Receiving notice from him that the queens would be sent about the 1st of April, I removed the black queens about that time, in order to prepare my colonies to receive the Italian ones. "But the rains descended, and the floods came," and I found my hopes were built upon a sandy foundation; in other words, those floods cut Mr. Viallon off from communication with Texas. I had one fine Italian queen, which I had obtained of Mr. W. Z. Hutchinson the preceding year, and failing to get my queens at the time I expected them, I found that my only chance was to raise queens from that one tested queen. I accordingly took a frame of eggs and larvæ from my Italian colony, and placed it in the strongest black swarm I had, and every day I examined my black swarms (I then had four) I tore down the queen-cells, and with my hairpin removed the drone larvæ until none were left. I then inserted my Italian queen-cells, and did not disturb them for a while, except to get in front of the hives every day, and destroy what few black drones would occasionally stray into them from other apiaries. On the 20th day after I gave the frame of brood to that black swarm, I opened one hive, and, to my astonishment, found the first frame I took out filled with sealed drone brood. This alarmed me; for I thought they must have stolen a black queen from another apiary, until I found "her majesty" crawling among the bees, and as bright as her mother. I concluded, after consulting Mr. Mosher, to let the drone brood alone, as I was positive that I had previously destroyed all the black larvæ, and, sure enough, those drones proved as bright as any I have ever seen since. Now comes the test. In your A B C book I believe you say it takes the egg 3½ days to hatch into larvæ, and the bees feed it 3½ days before sealing it up. Now, allowing 7 days for the sealing of that drone brood, we have 13 days left for the queen to hatch in; and if she was hatched from the oldest larvæ in the frame, it could not have been more than 16½ days from the time the egg was deposited in the cell until it was converted into a laying queen.

BEE-KEEPING; IS IT TOO HARD WORK FOR WOMEN?

I notice in the Dec. No. that Mrs. Shepard asks, "Is bee-keeping too hard work for women?" For the encouragement of the ladies I will review my year's work.

I commenced the 1st of March with three swarms. I have increased them to 27, and taken 732 lbs. of extracted honey. With the exception of a little help I received in extracting I did all of the work for myself, besides making frames for all of my own hives, and several of those which I sold (I mean I put the frames together). I transferred from box into Simplicity hives, and Italianized 7 colonies for other parties, and several times took my extractor and went a couple of miles into the country and extracted honey for persons who had no extractor. Three times I went 9 miles from home and introduced Italian queens for inexperienced bee-keepers. This has been my first year as a regular apiculturist, and I have done a great deal of my housework. Sometimes I have had it seem more than any one person could accomplish, but I always realized the fulfillment of the promise, "As thy day, so shall thy strength be." My husband has been afflicted with rheumatism for several months, and sometimes we fear he will be helpless. My object in increasing the bees, and engaging wholly in apiculture as I have, was to furnish him with work which would not be so hard for him as that he is at present engaged in (carpentering). My success in the business, which I consider remarkable under the circumstances, I attribute to the promise, "Commit thy way unto the Lord. Trust also in him, and he shall bring it to pass." **MRS. A. C. MOSHER.**

San Marcos, Texas, Dec. 6, 1882.

Surely God will bless your labors, my friend, if you go about your work in the way you indicate by your closing text. I am a little puzzled about that frame of drone brood you mention. Was your young queen a drone-layer? If not, how did she come to fill a frame with drone eggs the first thing? A queen might hatch in nine days from the time you put the frame of Italian brood in, but I should hardly think it probable for her to be laying in 4 days more, though it might be. I am very glad indeed to get so good a report for our Ladies' Department.

I am an A B C scholar. Husband died April 2, 1882, leaving me 22 colonies of bees, and no experience. Increased to 29, and, with the assistance of a young lady to handle the smoker for me, took over four barrels of extracted honey from them. Surely the dear Lord has been wonderfully good to me in my affliction; has blessed me both temporally and spiritually, and I praise him for it. **MRS. HENRY CULP.**

Hilliard, Franklin Co., O., Oct. 3, 1882.

Thank God you have done so well with the bees, my friend. I have often thought of you anxiously since our old friend, your husband, was taken away.

HONEY FROM GLADIOLUS.

We all read GLEANINGS and the JUVENILE, and enjoy them very much. I shall want some honey-plants for my flower-garden next year. Did you ever notice the amount of *sweet water* in the gladiolus blossoms? When they begin to close, my children pull them from the stalk and suck the honey, as they call it. I think there is four or five drops in every one, but I do not know whether bees will work on them, as there are none within ten miles of us (except bumble-bees). By the way, I have noticed how they carry the pollen, I suppose. I have seen them with cakes, or flakes as large around as a small pea — of course, flat; but they look so queer, and seem to resent any inquisitiveness about their affairs. **MRS. H. U. ROSE.**

Leland, Wash. Ter'y, Sept. 22, 1882.

I do not know that I have noticed the honey in the gladiolus, but I have often noticed honey in different kinds of house-plants; and since the matter has been discussed so much, I have noticed in what great profusion the nectar is often secreted, when the conditions are just right. Thank you for calling our attention to the gladiolus, my friend.

As to that smoker, it is just a perfect little smoke-stack, only it will "grunt" every time it breathes. I suppose it is wrong for me to say so, but I am awful glad I broke the Simplicity, for the Clark is so much better.

I commenced this spring with one hive of bees, and not very strong at that; increased to 4 — one natural swarm, and two artificial; took 70 lbs. of nice honey out of an old hive, besides a lot of boxes that were not filled out. The natural swarm made 15 lbs. I am very thankful, and *wonderfully* pleased. If anybody had told me two years ago that I would handle bees and get so much honey, I would not have believed it. Of course, there are reports of others who have done much better; but I am satisfied and thankful. Two of my neighbors took bee-trees, and they brought me the bees from three trees. They are a large brown bee; so in all I have seven hives of bees. **ANN SCAIFE.**

Barbour Mills, Lycoming Co., Pa., Dec., 1882.

I am very glad indeed, my friend, to hear you are pleased with your new industry, but I am very sorry to know that any of the smokers we have sent out have ever behaved in so undignified a way as to "grunt" when they are called on to help, more especially when it was a lady that required their services. If it is one with the new spring, a small drop of oil on the coil will fix it. And so you have already transferred bees that came out of a bee-tree, have you? Well, I think you might feel encouraged, for only a beginner.

WINTERING IN CELLARS, AND AMOUNT OF HONEY CONSUMED.

HOW MANY POUNDS OF BEES ARE THERE IN AN AVERAGE COLONY OF BEES IN WINTER?

WHEN the flow of honey is stopped by frost I remove all surplus boxes, and examine the brood-frames to see if they have enough honey to winter on, which should not be less than enough to make 4 full frames; 5 and 6 would be better, if one does not want to feed in spring. I use the Langstroth hive, and, after they are examined, the entrance is contracted from one to three inches, and the honey-board put on. The honey-boards have in the middle, running crosswise, a slot-hole ⅝x8 in., which are opened when it begins to freeze.

When it is time to place them in the cellar I take common lath and saw it in pieces the exact width of each hive, and place before the entrance, leaving a space of 1-12 of an inch underneath for ventilation; this, together with the hole in the honey-board, and the cover also raised about 1-12 an inch, is all the ventilation I think is needed, and they will remain very quiet, unless too warm weather sets in, or dysentery makes its appearance, when they should be taken out.

Before placing in cellar, each hive is weighed and then placed in the cellar on 2x4 scantling, raised some 14 inches from the ground, the rear of hive being raised an inch more; if hive and all weigh 75 lbs., I think they will winter all right, although I had some weigh as low as 65 lbs., and yet winter well; however they had to be fed some in spring. The following is taken from my diary:—

Placed in cellar Nov. 4	Av. loss per colony for winter of '79-80, 6⅞ lbs	No. of days in cellar, 144
" " 14	" " '80-81, 9⅛ "	" " 151
" " 14	" " '81-82, 9⅔ "	" " 125

General average loss, - 8 4-9; av. No. of days, 140

In looking over the back numbers of GLEANINGS I see in the April No., 1878, W. A. Eddy's report of 52 colonies which were in the cellar 100 days; average loss per colony, 14 lbs., which makes a difference of a little over 5½ lbs. per colony, which would tally one in favor of having the entrance nearly closed.

Next, the cellar can be used for storing other things, and, by placing some boards in front of the hives, a candle can be taken into the apartment without disturbing the bees, which, for those who keep only a few hives, is very important.

While I think a thin-walled hive is handier for winter, a chaff hive would be better for the spring, as we have lost more by spring dwindling than by wintering. Last spring we had 6 colonies; 2 died by spring dwindling, and the other 4 were very much weakened; increased to 10 and got 500 lbs. comb honey; and if we had had time to take care of them, and put on more sections, we might have had 200 lbs. more, as the bees were lying idle in the best part of the season. One hive gave 200 lbs., but no swarms; but as we keep bees only for honey for home use we were content, as we have enough and some to spare. All ten hives are placed in the cellar in good condition, save one late swarm, which may need feeding toward spring. I will see how this winter will compare with the rest.

REUBEN SNIDER.

Lettsville, Louisa Co., Ia., Dec. 16, 1882.

The above is very moderate for the amount of stores consumed, friend S., and any one ought to be satisfied with it; but since we have been selling bees by the pound I have often been led to inquire, What is a colony? A single pound of bees may come through the winter safely, and, in fact, I am not sure but that we sometimes see only a half-pound go through and come out lively, especially if wintered in the right kind of a cellar. Now, what we would like to get at is, How many pounds of stores will be needed for one pound of bees? Suppose we say five, and the result will then be, that, while a small colony may winter all right, and consume less than 5 lbs., a good strong one might consume 25 and starve to death after that. One other point: The single pound of bees *might*, with a good queen, build up so as to equal, or even go ahead of, by the first of June, the colony that had 5 lbs. of bees in the winter, and consumed 25 lbs. You see from this, friends, one reason why we have such a diversity of reports in regard to the amount required for winter. We have never weighed colonies wintered in the chaff hive, but I think they often winter through until they begin to gather pollen, with not much more than friend S. has reported.

SELLING EXTRACTED HONEY.

HOW FRIEND "MALONE" SUCCEEDED IN SELLING HIS HONEY.

I THOUGHT I would give my experience in selling extracted honey. My first honey I took to market July 18th in Mason quart jars. I sold at 50 cts., jar thrown in. I supplied most all the groceries in the city. I sold my honey readily, and felt proud, "you bet." I loaded up the 22, my second load, and started to market, feeling happy of course; but not a pound could I sell at any of the groceries. They all told me that they had all the honey I had sold them, and that extracted honey would not sell; if I had comb honey, they would sell it. This gave me the "blues." Now, what to do was what troubled me. The first thought was to buy barrels and ship my honey; but a new idea struck me, and that was to start peddling. I had an errand at the mill, so I drove up. Said I, "Look here!"

He said, "What's that, Bill?"

I said, "Pure linn honey, just from the flowers; taste it."

He did, and said, "What's it worth?"

I said, "Fifty cents."

I sold two, and started up town and met a man with whom I was acquainted, and told him the same, and sold to him; and before I got half way around the square I had sold all out for the cash.

With the next load I went into the Court-house to the county officers and into the banks, and among the physicians and lawyers; and nine times out of ten I made a sale, and for the *cash too*. I was in town yesterday; and every time I go I meet people on nearly every corner, and they will say, "Bill, have you got any more honey? Can't you take out a five-gallon keg or jar, and bring me some more honey?"

But right here a trouble sprang up. Those grocerymen commenced to growl; I was selling to the consumer at the same rate I sold to the merchant! Was this right? My honey is all sold, except about 400 lbs., and now the trouble is going to be to supply the demand next year.

RUNAWAY SWARMS COMING BACK TWO WEEKS AFTER

I had a young Cyprian queen that took a fine swarm of bees to the woods about Aug. 27, and was gone 15 days, and came back. This seems strange, but I had so much trouble to get her to laying last spring that I got acquainted with her, and knew her as soon as I saw her. The sequel is, that the swarm went one mile and stopped, and the tree was cut on the 14th day, and the bees hived; on the 15th they came home and alighted. They were glad to get back. I think I shall breed from her next year. I have my bees put up so warm, that on the 8th of December they carried out dead bees, when the thermometer was 14° below zero. This was on a clear day; when cloudy they are still.

WM. MALONE.

Oakley, Mason Co., Ia., Dec. 12, 1882.

The above letter possesses a double interest to us, from the fact that friend M. is the one who gave us the whopping report on page 591 of Dec. No. I quite agree with the moral in the little story above; but while opening the market in this way by appeals to those whom we know, I would at the same time remember the retailer, and either ask 60c. of consumers, and only 50 from the dealers, or say 45 to the dealers, if we can stand it, or any way so as to have a uniform price at retail, and a clear understanding as to the price the honey is to be sold at. If we do this, no retailer will object to having the market worked up by the producer.—It is true, that a swarm does sometimes come back when disappointed, or upset in their plans, as in the instance mentioned; but I have never been able to decide whether it was the queen that did the business, or the bees, when they confer together in the matter, or whether it was sometimes the one and sometimes the other. We know it is sometimes the queen, for she has been known to lead an entire colony, to which she had been introduced, back to the spot where she took her first wedding flight.

Heads of Grain, From Different Fields.

BEES IN NEBRASKA, ETC.

My own experience, although not very flattering, may be the means of letting people know that bees can be kept in Nebraska, and be made a success. In the first place, I want it understood that I am an A B C scholar, and at the very foot of the class, second place. I am not in the habit of writing for publication; so, friend bee-keepers, please excuse all mistakes. Now about the workings of the wonderful little bee. The first of last July I bought of one of my neighbors two colonies of Italians, and, not knowing any more about bees than a child does about his letters before he can talk, of course it was not a very easy task; but having a desire to learn the business, I went at it with GLEANINGS for my guide (thanks to friend Root for instructions in that way). After a few days my bees were ready to swarm; then my first step was to divide, for it was bees I was after, not honey. I went through it in good shape; I got only a few of those sharp bites that they are apt to give a beginner; and having my wife with me, of course she shared the same fate. But we did not give it up in that way. We kept on dividing whenever it was needed, until I had five colonies, and had one go for parts unknown; and having good weather for honey they worked right along, just as though nothing had happened, filling three frames with very nice honey.

In regard to the amount of honey received from them, I can not brag; for I did not give them a good chance, on account of increasing my number of bees; but they stored enough for themselves and gave me 75 lbs. surplus. I think that was well done for the first step. I am wintering mine on their summer stands, as we do not have very cold weather here, and not much snow. My bees have flown every day yet, except four or five. To-day they were lively, and flying some when it is cold.

And now, friend Root, in your behalf I will say this: I believe you to be a good Christian man by your kind and loving words spoken through your columns. My family listen to them with ears wide open, and say they would like to see Mr. Root and his place of business. We are strangers to each other, although I hope we are not so in Christ.

Steele City, Neb., Dec. 11, 1882. L. L. WHING.

Why, bless your heart, friend W., I don't know what I have done to merit such kind words; I am afraid if you should come and see me so driven and hampered with business as I often am, you would be disappointed, at any rate. Your letter has done me good, for I can now go about my tasks with a lighter heart.

SWARMING AT NIGHT.

W. McKay Dougan, on page 606, brings to mind a case of bees swarming at night. One day in July, 1881, while visiting my grandma's, and while out looking at their bees with my cousin and uncle, they told me one swarm had played a fine trick on them by absconding one night after dark. While they were milking the cows they heard the bees making a noise like swarming, so they went to see; and, sure enough, they were pouring out of the hive, and seemed to be a big swarm by the noise they made, for they could not see them in the air, as it was so dark. After all were out of the hive they arose high in the air and seemed to go off in a north direction. These were blacks, and the hive was full of moths.

SWARMING TOO EARLY IN THE SPRING.

Did you ever have any bees swarm so early in the spring they could not gather stores to live on? One of my neighbors had one such. He did not know what to do with them; none of them would leave the hive when there was a warm day, so he came to me. I went over to look at them, and found a big swarm of black bees. We opened the hive, but the bees made no motion to sting, and seemed to care for nothing only to cluster as closely together as possible. They had been hived four days. We went to the old hive. It was a box hive, and full of brood and stores. He turned it to one side and pulled one comb down, and we went and fastened it in the new hive, for he had no other one. We found the queen in this new swarm. It looked like an old queen. I told him he had better feed them. These bees did no good, for the moths got them in the summer. It was some time in May that they swarmed. The old stand cast several swarms through the summer, but none of them did any good. What was the matter with them?

19° BELOW ZERO.

It was pretty cold here the 7th. It was 19° below zero, with about five inches of snow; not much like last winter, is it? J. A. THORNTON.

Lima, Ill., Dec. 9, 1882.

The case you mention, friend T., is not as hard to account for, because it was just at dark, or nearly dark. Very likely they had a tree already picked out, and went directly for it, and reached it without trouble. Bees often have to be fed when they swarm very early in the spring.

AN A B C SCHOLAR'S REPORT.

I must say, that I am well pleased with the extractor, Favorite scales, foundation, and Clark smoker. Although the scales dropped through the box in transit, and broke the flange on the bottom in two, it did not spoil them so but that I could weigh the new baby with them the other day.

I have just completed my first year in apiculture, and will give you a report:—

Paid for 3 colonies, bees delivered	$30 00
For extractor, scales, fdn., lumber, etc	27 50
Time lost from work	4 60
Total	$62 10
Received 320 lbs. extracted honey, sold at 14c.	$44 80
1 colony sold	7 00
Total	$51 80
Amount expended more than received	10 30
Have on hand, 8 colonies of bees @ $7.00	$56 00
Fixtures that are as good as new	26 00
Total	$82 00
Profits	71 70

I did the work mornings and evenings with the four days given above, and worked in a shop near home ten hours per day for $30.00 per month. The four days I spent with the bees I received $17.92½ per day, besides the knowledge I have gained, that I set no price on, as it is not for sale. My honey was nearly all white-clover. I would have had more if the weather had not been so cold and wet.

NON-SWARMING BEES.

There is a colony in this place that has occupied the same hive for 12 years, and are not known to have swarmed in that time. There has been as high as 200 lbs. of comb honey taken from them in a single season. At one time they built a comb 3 ft. long, 18 in. wide, and 4 in. thick. They have never received any care, except to rob them. I shall try next season to get some in shape to be convenient to handle, but as near like them as possible.

M. D. McCORKLE.

Cortland, Trumbull Co., O., Nov. 27, 1882.

Friend M., we like your letter, all except one point. We are cross about that "new baby" because we haven't one at our house.—We have heard of non-sitting hens, and some time ago something was said about a breed of bees that wouldn't swarm; but no one has ever offered that strain for sale, that we know of. Perhaps friend Hasty and a few others might buy some, if you could get that swarm of bees and give us some queens reared from it. Who knows?

WIRING FRAMES ON HOOKS MADE FROM BLIND STAPLES.

On page 615 of GLEANINGS, I notice a communication from C. H. Deane, regarding wired frames by the use of staples. I send you the inclosed as a specimen of the way I wire frames; the hooks can be rapidly prepared from blind staples, and clinched in the bottom of top-bars readily. This I call the "Diamond frame," and it is very securely braced. One staple will make two hooks. Try one frame.

J. L. ELLINGWOOD.

St. Joseph, Mo., Dec. 9, 1882.

Thanks, friend E. Your staples work well, but it is quite a little task to cut blind staples in two, and bend each end a little. We want finished ones, turned right out by a machine. If you drive them through and *clinch*, that takes time, and it will mar the appearance of the top-bar.

OREGON.

I just want to say that Oregon is coming on in "*beesness*." There is an apiary in Portland City, of 150 stands, and it is not at all an uncommon thing to find from 3 to 12 stands on a farm. Father has 12; he went out to feed them one day this fall without his bee-dress on. I was in the yard petting the chickens when I heard him yell, and pretty soon he came stamping around the house, pawing his ears, first one and then the other. When he saw me he laughed, and said he guessed he'd put on his bee-dress. He wants to send for some things; and I thought, while he was picking them out I would "chip in" a word or two.

A. M. HALL.

Beaverton, Ore., Nov. 27, 1882.

That's right, friend H. We are always glad to have the young folks "chip in;" and still you do not say you are one of our juveniles. Somehow there seems to be a sort of juvenile "twang" to your letter, after all. How about honey in Oregon? Surely you don't feed all the time, do you?

VIRGINIA CREEPER AS A HONEY-PLANT.

I notice that you have not mentioned the Virginia creeper (*Ampelopsis quinquefolia*) among your list of honey-plants. Last season my bees (natives) worked on it for nearly two weeks as busily as ever I saw them work on fruit-blossoms. I thought it was perhaps owing to the great scarcity of honey; yet the buckwheat was still in full bloom; in fact, our bees in this section would have fared very badly this winter if it were not for the buckwheat.

LANDON HALL.

Cowansville, Quebec, Can., Dec. 7, 1882.

It has before been alluded to in our back volumes, friend Hall, but we have never had a report before so definite in regard to it as the one you give.

HONEY FROM THE ABUTILON, OR FLOWERING MAPLE.

This evening my wife noticed a yellow abutilon, or flowering maple, which we have now in the house, beautifully in bloom, and on each blossom we can see a large drop of honey, which on taking off and eating, is very sweet, and in a short time there is another drop of clear honey. Will not this make a good bee-plant?

E. EDMUNDSON.

West Branch, Iowa, Nov. 29, 1882.

To be sure, it will make a glorious bee-plant, friend E. We have a flowering maple here in the office, but there isn't any honey in the "posies." Tell us how much you will take for some slips from the plant. Will my good sister, and other "womens" who know about propagating by slips, tell us how we shall go to work to get a lot of them? and has anybody else got a "strain" of flowering maples that lets the honey run out every little while, or oftener? and will you tell us, or have your good wife do so, my friend, about how many minutes or hours it is before there is another drop after you have eaten one drop? Don't you believe I can ask questions almost equal to the women folks, when I get started, eh?

CAN A QUEEN BE REARED IN LESS THAN 16 DAYS FROM THE EGG?

You know I am one of the youngest of the A B C class, but studying the A B C book, and following it strictly. I received queens last season simply for my instruction, and I must say I find nothing very new in the statement of J. E. Pond, Jr., Nov. GLEANINGS, pages 545, 546. Last year I raised a queen in 14 days, counting two days in egg and 12 days more till hatched out, first and last days counted in. The queen was a little dark, but her progeny proved nearly the best this year, and in hardiness, prolificness and as honey-gatherers, better than her imported mother. On Wednesday, July 5, I gave to a strong divided colony slices of comb with new-laid eggs of the same queen (imported, 2 years old). On Saturday, the 15th of July, I mentioned to another bee-keeper, that by next Tuesday or Wednesday I would have a nice lot, about 20 or more, young queens. Next morning, about 9 o'clock (Sunday the 16th of July), a swarm issued from the hive in which the queen-cells were. I hived the swarm in a new hive, and then opened the other to look after the cells. I found a young queen just emerging from one cell, and other cells open, and the little caps yet on hinges. I cut out the slices with cells; and in less than 5 minutes, 4 splendid young queens hatched in my hands. My wife had enough to do to save them and place them in glasses and cups; and in about an hour there were standing 18 cups and glasses on the table, each containing a perfect young queen; about 8 cells hatched the 2 following days, but showed symptoms of weakness compared with the others, and so I did not use the same. Now, my dear sir, I know you will chide me when I tell you it took me nearly all Sunday to prepare 18 nuclei to save the queens.

Count first and last day of Mr. Pond's statement, as we should, and you have 14 days; the queen may have laid in the center of comb ½ hour later after the comb was put in, and Mr. Pond states himself that the queen was not 24 hours old; she may have been much younger yet, and you have to count the last day. I always look on these queens hatched in 14 days as being a sign of strength and hardiness, but I may be wrong.

LARGE-SIZED BEES.

Some Eastern man who saw my Italian bees, says they are much bigger here than in the East, and I nearly believe it, because I put the sample of the Jones perforated zinc before the entrance (not in the honey season), and only a few bees could enter with difficulty, and many not at all. G. DAMKOHLER.

Clarence, Shelby Co., Mo., Nov. 29, 1882.

And so you would expect that what we call ten-day queens would be superior, rather than otherwise, would you, friend D.? I believe it has been before suggested, that the first hatched are the strongest and most vigorous, and this would imply that nature's course in artificial swarming is the right one; for the first hatched then destroys all others, unless there are after-swarms.—In regard to taking care of 18 young queens on Sunday, I do not know but that I should have done nearly the same. I would do just as little work as possible on Sunday, but still I should not want a great deal of property to be lost, when it was clear and plain it would be lost if not cared for.—Your concluding idea, that the Jones perforated zinc is going to prove a gauge to *size* our bees by, is worthy of some attention.

REPORT FROM THE OLD KEYSTONE.

The season of 1882 has been a very indifferent one for bee-keepers here. The spring opened out beautifully, promising abundant bloom of maple, and fruit of various kinds. Our bees had just fairly got to work when a cold wave passed over our country, freezing every thing in the shape of early bloom. I tell you, it made me feel "kind o' blue." The next thing in order was to feed quite a number of colonies, to keep them from starving. Oh how I pitied them! they tried to find honey in the frozen bloom, but failed. By and by the white clover came, and along with it came cold wet weather. It yielded but a small amount of honey — about enough to keep up brood-rearing, etc. I began the season with 29 colonies — 27 Italian and 2 black, all in fair condition. I transferred the 2 blacks, and two weeks after I swarmed them and gave them Cyprian queens. I increased from 29 to 63 colonies; doubled up to 59; have gone into the winter with 45 in good condition, 5 rather weak, and 9 nuclei on 3 and 4 frames. I have now 52 Italians and 7 Cyprians, whole count; had one swarm that went to the woods, that is not included in this count; two-thirds of increase was by natural swarming. I reared and sold 21 queens, most of them tested. Now for the surplus: I used 700 one-pound section boxes in my apiary, filled with fdn.; got 300 partly filled; only 50 in marketable condition. The whole 700 were filled with nice comb, but only the above in honey. I got 150 lbs. of comb honey from my early swarms, and about 200 combs in frames, built out nicely from fdn.

We had a fine flow of honey from buckwheat — the best buckwheat season we have had for 15 years in our part of the State, and I tell you the little fellows lost no time while it lasted. Now this, my report, will seem insignificant, compared with many I read in GLEANINGS. I should be pleased if I could write a better one, but the above is all I can truthfully give. JOHN N. PUGH.

Hannahstown, Pa., Dec. 18, 1882.

HONEY-DEW, AND HONEY THAT WASN'T "DEW" AT ALL.

I never believed in honey-dew. Why, it is no trick for honey-dew to be found on hickory leaves when the honey is in the body of the tree. When we buy a load of hickory wood, and it is green, and lies a day or two on the woodpile, we can almost always see the honey oozing out at both ends of the wood. But where I am beat is here: I bought one L. hive; the top was made of flooring boards; I put in a good swarm of bees, and had a thick piece of heavy ducking over the brood-frames. Well, after they had filled the frames I took the top off the hive, and on the ducking I found some water, as I supposed, and I thought to wipe it off; but to my surprise it was thick honey, bright and clear. Now, how did that honey get there? There was about a table-spoonful of it. I never heard of any thing like that before. There are no trees standing near my hives.

B. F. BARR.

Flagler's, Marion Co., Ia., Dec. 9, 1882.

Friend B., I think somebody opened your hive, and cut out a chunk of honey, letting some drop on the mat; afterward the bees filled up the gap; but the honey stayed, and ripened on the ducking until you found it. Eh?

ABOUT GLEANINGS, ETC.

The first copy of GLEANINGS I ever saw was the May number of 1878; that and friend Root's price list came together, as I believe they generally do, to strangers. It was also the first copy of *any* bee paper I had ever seen, and that and the price list were a complete puzzle to me; but the familiar, every-day, Christian-like manner in which the editor talked to his patrons also seemed strange, for I had never seen much if any of this kind of talk outside of the religious papers, and very little of it in *them*, and consequently I soon came to the conclusion that friend Root must be a rather uncommon kind of a personage, probably a superannuated clergyman who had ceased from the active duties of his profession because of ill health or something of the kind, and had taken up bee-keeping as a sort of recreation, and had become an enthusiast in the business. But after I had read a few numbers I came to the conclusion that I was wrong about every thing except the enthusiasm, and I am quite sure he is not lacking in that regard. How much Novice has done to unite the bee-keepers of our land into one great band of brothers and sisters, it would be difficult to estimate; and as to how much he has done to elevate bee-keeping to the dignity of a pleasant and remunerative pursuit which is giving support to thousands of noble men and women, we have, among many others, the testimony of so learned and able an apiarian as Prof. Cook, who gives the following: * * * * * * * * *

DOLLAR QUEENS.

A great deal is being said in the journals about cheap queens, both for and against them. As a great majority of queens are reared much in the same way, that is, other than by natural swarming, it seems to me that the question, when boiled down, is about this: Which pays best, for me to buy untested queens, and test them myself, or pay some other bee-keeper for testing them for me, whose test might not suit me after all? Although I am not as fully informed on the subject as I hope to be, with my present knowledge of the subject I think I am in favor of cheap, or dollar queens. With the great number of reports of large yields of honey that are coming in from all over the country, and the success of apiarists generally, taking into consideration the great numbers of cheap queens sold, I can not see how a man can stand up before the bee-keeping public and say that dollar queens are hindering the success of our favorite pursuit. Queen-breeders should rear their queens in the most approved manner, and deal with their customers as they would wish to be dealt with, and the queens will speak for themselves, and their patrons will receive the worth of their money.

St. Clairsville, O., Dec. 19, 1882. R. M. DENHAM.

Why, my good friend D., what have I ever done to merit such kind words from one who has been, until to-day, a perfect stranger. Perhaps I am doing wrong to let it come out in print at all; but I wanted what you said about dollar queens; and then your whole letter runs on so neighborly like, it seemed too bad to spoil it, more than to put stars in place of those kind words you quoted from friend Cook. Don't you know such complimentary speeches should never be repeated right to one's face? Well, well, the next letter I get that cuts and hurts, I will place alongside of yours, and then try to let one balance the other, and so manage to look happy still.

CHAFF CUSHIONS; SUGGESTIONS IN REGARD TO MAKING.

My cushions, which I consider superior to any I have ever used, I make as follows: I use a frame of ½ or ⅜ in. stuff by nailing or dovetailing the corners together, just large enough to fit the inside of the hive, easily making the frame as deep as the thickness of cushion desired. I prefer about two inches. Tack a piece of burlap on the frame, with 3-oz. tacks, for a bottom. Set it on bench, and fill with chaff; tack on another piece of the same material on top, and the cushion is completed. Use ⅜-in. strips of thin leather or oil cloth to tack through. It prevents heads of tacks from pulling through, and holds cloth firmly to the wood. Tack on side and end, then stretch the cloth firmly each way while tacking the rest, and it makes a nice smooth job. Perhaps these frames may be a trifle more expensive than those without frames; but after a thorough trial I consider them enough better to much more than pay the extra expense; they hold themselves and chaff in much better position in the hive, and bees are prevented from crawling up at the sides on top of the cushion, which is sometimes attended with considerable loss, especially in sudden changes of weather. H. V. N. DIMMICK.

Hubbardsville, N. Y., Dec. 18, 1882.

Thanks for the idea, friend D. If we understand you correctly, your plan is simply a box with the depth of cushion desired, having for its top and bottom burlap tightly stretched over, and fastened. This box, filled with chaff, gives two good features: First, it insures good ventilation, and also prevents the bees from getting above. Right here we might mention that friend Drum, at the Ohio State Fair, showed us a cushion similar to the one above. He also gave it as his opinion, that a cushion with a depth of two inches is better than those of other dimensions. This he says he has verified by experiments; first, at a depth of one foot; then six inches, and afterward of other dimensions, until he decided on two inches. At these dimensions he found his bees wintered the best, coming out in the spring strong, dry, and healthy. Friend Drum left the top open.

RAPE AS A HONEY-PLANT.

Now a little about rape. I sowed a little strip about 12 feet wide and 10 rods long, after early potatoes and peas were harvested. I think it was early in August. Although the weather was dry for some time, it did well, and was yellow with blossoms long after severe frosts came; and every time that a bee dared to risk himself outdoors he would go for the rape; and when it was warmed up so they could fly freely they were as thick on it as they could be on buckwheat, and seemed to gather both honey and pollen quite freely after it had frozen so hard that it had commenced to fall down. The little balls of pollen I could see, and could see the bees busily sucking honey from the flowers. The 8th of Nov. they worked thick on it, since which time they have not been out any. Now, would it not be very nice to have a good patch of it to keep up brood-rearing very late in the fall, and thus have plenty of young bees for wintering, and also to keep them out of mischief after other sources of honey are cut off? But on the other hand, how would so much pollen, gathered late, affect the wintering? and how bad a plant is it to get in the land? or, rather, how much of a job is it to get it out of the land? I was rather glad that mine froze and did not fill, for I felt rather afraid of it. I should think it would be a good crop to plow under for manure.

RAPE FOR FORAGE.

And rape is good to help out short pasture. My cows ate it readily, and a bull that I keep up was extremely fond of it, and would eat it up clean, even the stalks that were half an inch through. If we sowed early enough for the seed to ripen, what could we use the seed for? Would it do to grind with oats or corn for feed? E. Z. GREEN.

Montague, Mich., Dec. 1, 1882.

I think rape is going to prove an excellent feed for bees and live stock, especially if sown as late as yours was. I should never think of calling rape a weed, even if the seed may live over, and come up next year. One of our "young Canadians" says they raise rape in Canada, on purpose for pasture; and I am inclined to think it would pay well, as it can be raised in the fall, without interfering at all with any other crop. We have made arrangements to furnish the seed at lower prices than formerly. Will those having seed for sale send samples, and say what they will take for it?

STATISTICS ON BEES AND HONEY.

I was in hopes the subject of collecting statistics for the use of the National Bee-keepers' Soc'y would be discussed at the Mich. State Convention last week, and some plan agreed upon to be carried out in this State. I think Professor Cook's plan of furnishing supervisors or assessors with blanks to be filled out at the time of making the spring assessments would be the most feasible, at least in this State. It would make but little additional labor for that officer, and, as a general thing, I am confident they would be willing to assist in the work. A postal card properly prepared could be furnished each supervisor, who would fill them out and forward them to Professor Cook or some person designated by the National Committee without any expense for postage above the price of a postal card for each township. These postal cards could be furnished by the State Society, or the various societies of the State, or in part by voluntary contributions from the bee-keepers of the State, at a very slight expense to each. With this plan carried out, the statistics could be collected throughout the State with much more accuracy, and with less trouble and expense, than by any other I have seen advanced. I can see but one objection to this plan: It might cause a more general assessment of bees for taxes. But as some are already paying taxes on their bees, I can see no plausible reason why all should not be treated alike. S. H. MALLORY.

Decatur, Mich., Dec. 11, 1882.

I entirely agree with you, friend H.; and, in fact, the assessors of the State of Ohio do tax the bees and honey both. In regard to taxes, I have always paid taxes, and would be ashamed to have it known that our industry was not taxed like other farm stock.

As you failed to visit me one year ago this fall, as you contemplated, I will mention some things you would have seen if you had come; especially a hive that has wintered bees successfully for the past five years.

A SUCCESSFUL WINTERING-HIVE.

The hive is one story and a half, used for comb honey; the brood department is 14½ x 14¼ in., 11 in. deep, no chaff at the bottom or front; two inches of chaff at the back and sides. The chaff at the sides is separated from the bees by boards ¼ in. or less thick, shoved down into grooves cut in the end-boards before the hives are put together. I think it very essential that the bees be separated from the chaff by as little wood as possible. I see that there are passages through the combs, and two sticks ½ x ½ inch are laid across the tops of the frames; then one thickness of cotton cloth, two of old carpet, and a chaff cushion 4 inches thick. I would never use enameled cloth over bees in winter. I have about fifty of the hives in use — 95 swarms in various kinds of hives. I have 3 tenement hives, 4 swarms in each, all doing nicely at all times of the year. I cordially invite all bee-keepers to make me a visit. They shall have their board and lodging free, for I generally learn something new from every discussion of the bee subject.

MOVING A WORKER EGG TO A DRONE-CELL.

Being very anxious to ascertain whether the worker bees have the power to change the egg from a worker to a drone, I transferred eggs from worker-cells to drone-cells in a queenless colony — such a swarm being more anxious to raise drones. They produced worker bees. The eggs may have been too old — too near the time of hatching. I intend to make further experiments in the same direction. Hoping we shall solve that puzzling question before another summer passes, I should like instructions from any one how such experiments should be conducted.

FOOT-POWER BUZZ-SAWS.

I should like to say to those who think of making foot-power buzz-saws, don't do it; I have tried it. It is too hard work for any man to cut stuff for more than a dozen hives.

A HOME-MADE WINDMILL.

I now run a 6-inch saw through 2-inch plank by means of a windmill of my own construction, doing good work, making surplus boxes and hives for 100 swarms. This windmill cost me not to exceed $25.00 besides my own work. It also runs a drag-saw that saws my stovewood. The buzz-saw, mandrel, and bearings, cost $2.00, besides my labor. For bearings I "Babbitted" in hard-wood boxes, which is a good way to do, I think.

I did not get much surplus honey this season until Aug. and Sept., when the bees did extremely well. The brood departments of my hives are very heavy with honey now, which, in my opinion, will lessen their chances to winter, if we have a long cold one. My swarm on scales lost 1¾ lbs. in November.

My success in wintering two years ago has been given in GLEANINGS. One year ago I lost one out of 105. That swarm lost its queen early in the fall, and therefore failed before spring. F. C. WHITE.

Euclid, Cuy. Co., O., Dec. 6, 1882.

I believe your experiment was properly made, in transferring eggs, friend W., for the result is always as you say, so far as I know. A worker egg produces a worker, no matter what cell *you* put it in, and a drone egg produces a drone, no matter what kind of a cell you put it in. When bees make a worker egg produce a drone they enlarge the cell, it is true; but they do something else also; that is, if they ever do make worker eggs produce drones.

$100 FROM ONE COLONY, ETC., AND ALL CARED FOR AFTER NIGHT AT THAT.

Last spring I had 26 stands of bees, and now I have 47 from natural swarming. I had one hive that swarmed 6 times, and made enough honey to do them, except one hive, and that one I shall have to feed. All the swarms came from 9 hives. From the queen I got of you a year ago I have now 24 hives. That colony that swarmed 6 times made 100 lbs. of surplus honey, worth 25c per lb.; 5 colonies at $15.00 apiece is worth $75.00; that would make bees and honey both $100. I think that will do very well for an A B C scholar. We extracted 76 gallons of honey, and I took 260 lbs. of comb honey. Honey here is now worth 25c per lb. My fall honey, I did not get to take any of it, as I was taken sick. All the honey was capped. When I began in the spring the bees had no honey. I was feeding all of them at the close of the season. They averaged over 100 lbs. to the colony. I make all my hives nights, as I work in the pattern shops of the B. & O. Railroad Co. I tend to my bees nights and mornings. I put all of my second swarms back, which numbered about 25, except 6 swarms from the large hive.

JOHN N. CARROLL.

Grafton, W. Va., Dec. 5, 1882.

Pretty good, friend C.; but it seems to me you have figured the 5 swarms pretty high, at $15.00 each. You ought to have some of the new bees that swarm after dark, and then, you see, you would be all right.

THE REASON FRIEND GIBBS IS "HAPPY."

Bees did well with us the past season. I had 35 colonies in spring; increased to 72; shipped 4100 lbs. of comb honey, 1¼-lb. sections; about 20 gallons of extracted. Quite a lot of rough and unfinished sections sold here at home that would not do to put in cases, say 300 lbs., and then we eat it three times a day the year round. I have no idea how much we do eat. But I will make the report: 4100 lbs. and 300 lbs. makes 4400 lbs., for which I am thankful. I have made bee-keeping a success. Since I commenced, 5 years ago, I have not had a reverse. I winter in cellar every time, and lose none. I may lose them all this winter; can't tell; if I don't, you may hear from me in the spring.

BLACKS.

Blacks are not worth keeping, in my opinion.

Lyndon, Ill., Dec. 21, 1882. E. P. GIBBS.

THE QUEEN THAT CAME HOME AFTER BEING SOLD, AND BROUGHT HER NEW FAMILY ALONG.

I commenced last spring with ten colonies, 3 of my own and 7 that I took to keep for half of the honey and half of the increase; 4 of the 7 were very weak in the spring. I increased the whole by natural and artificial swarming to 32; one went to the woods; bought one swarm in swarming-time, another late this fall. I divided the bees I took on shares. I go into winter quarters with 20 of my own, all in good fix, 10 packed in chaff, and 10 packed in very dry sawdust, all on their summer stands. I got about 260 lbs. honey, mostly extracted, and sold nearly all at 25 cts. per lb. I could not begin to supply the demand. I sold three queens; one for a dollar, and 2 hybrids at a quarter a piece. One of the hybrids was a very prolific queen. I introduced her for a neighbor into a small nucleus; she stayed about a week, filled up all her empty combs, and then came home and brought a part of the swarm with her. She went right into her old hive. I had put a young queen in the hive several days before she came back; it being Italian it was easy to tell which was killed. The Italian was soon brought out, with 6 or 8 bees clinging to it. I took it away from them. I then thought her a little too smart and good to kill or sell again, so I just let her alone. L. HAINES.

Moons, Fayette Co., O., Dec. 13, 1882.

MY REPORT FOR 1882.

Basswood did not open until July 25th, being about 12 days later than usual, and closed Aug. 6th. We had about 7 days the bees could work on basswood, the rest being wet and cold. On the 12th of Aug. I have the honey season marked closed, when I took my sections all off, with but few sealed up as they should be. On the 18th, I thought the bees were working hard; and on the 20th, while looking into some hives, I found them chock full of honey; so I went for the extractor, and put on my unfilled sections, and the result was, I got my sections all full and sealed up nicely, and quite a lot of extracted. On summing up my season's work I find I have taken 565 lbs. of extracted and 475 lbs. of comb honey, making in all 1040 lbs., or an average of 104 lbs. per colony. I sold my comb honey at 20 cts. per lb., and extracted at 13¼c. I increased to 22 good strong colonies and five nuclei, which are all in good condition for winter. I also raised 23 fine queens.

PERFORATED ZINC; KEEPING THE QUEEN OUT OF THE SURPLUS-HONEY APARTMENT.

On page 440, Sept. GLEANINGS, the question is asked, "Are we going to need Jones's perforated zinc?" I used Jones's perforated zinc sheets on top of hive (between hive and super) for extracted honey, and found it to work to perfection. I could not see any difference in the amount of honey stored in those that had the zinc on, and those that had not; but in every hive that had not on the zinc sheet, the queen went up into the supers and laid. I also used the perforated zinc to keep the queen out of the sections while at the side of the hives (as I work on the plan of side and top storing); but for the sections on the top, I used the Heddon honey-board, and I might say I had no trouble with the queens laying in the sections. JOHN MYERS.

Stratford, Ontario, Can., Dec., 1882.

Friend M., I am very much obliged indeed for your report in regard to the use of perforated zinc in place of, or as a honey-board. Many questions have been asked as to how it would answer, but we have had heretofore but few direct reports. As to the cost of these, we have just imported a very large lot of zinc from England, and can offer sheets, right for Simplicity or chaff hives, at an even 25c each.

THE DARK SIDE OF BEE CULTURE, WITH A SMALL "CRUMB OF COMFORT" THEREIN.

The past has been the worst season for honey in the Cumberland Mountains ever known. From what information I can obtain, 50% of all the bees wintered last winter are now starved to death. Directly after I wrote you in August, the bees began swarming out, and many of my largest stocks with most prolific queens deserted their hives, leaving their combs without honey or brood, a prey to the bee moth. The aster, the greatest autumn honey-plant of these parts, gave but light stores for winter — so light that I doubt if more than 10% of the bees will winter over, even of those that survived the summer.

THE "CRUMB."

I know of but one thing to console us bee-keepers in a poor season like the past; and that is, that all stock not endowed with the greatest endurance and capacity for collecting honey is destroyed, leaving nothing but the best to propagate from.

DANIEL KEPLER.

Chattanooga, Tenn., Dec. 11, 1882.

Friend Kepler is an Ohio man, who moved where he is now with a view, I presume, of getting a better locality. Well, although the above looks rather dismal I would, under no circumstances, advise anybody to let bees starve. Past records show that they may have the very best kind of a honey-yield next season, and we should, therefore, hold on to the bees. Where no honey is taken away from the bees, and they are not interfered much with, his crumb of comfort may work; but I do not believe I would recommend that plan very strongly, as a means of selecting the best stock.

I DIDN'T "STEAL 'EM."

I have read GLEANINGS for four years, and, as I say, I did not steal it (as my name does not appear on your book). I exchanged the *A. B. J.* for it with a neighbor, up to last Jan.; but his bees all died the winter before (1880 and '81), so he stopped taking it; so I must have it, and inclosed you will find the $1.00.

Bees have done well in this part of the country (North Illinois); that is, the last half of the summer.

It was very well the first half; the fall crop was not large; we get no honey from buckwheat, or next to none, in this part of the country. Sweet clover fills the gap between white clover and fall flowers. Basswood comes in with white clover, but bees will always leave clover for basswood. Heart's-ease is the best fall flower we have, and the nicest-flavored honey I ever ate.

We also have a flower that is called blue vervain that yields some honey, but I have not had enough to test its qualities. But what I would impress on every bee-keeper is the necessity of sowing seed for bee pasturage, for the streets and roads are full of noxious weeds that could be replaced by honey-plants, and I am pleased to say that the bee-keepers of this vicinity are alive to the fact that we must plant to fill the gap between white clover and fall flowers. I would recommend sweet clover, catnip, and motherwort as the 3 best honey-plants for this section of country. D. L. WHITNEY.

Rockton, Ills., Dec. 10, 1882.

FRUIT-TREES FOR "HONEY-PLANTS."

I see in last GLEANINGS an advertisement of one of our friends away down in Tennessee, offering, at a very fair price, fruit-trees; but he is too far south, I think, for his trees to grow up here in the spurs of the Alleghanies. But will not some of our friends who have nurseries, and would be willing to ship orders of 20, 25, or 50 trees, as many as one or two farmers would want, please stand up in GLEANINGS (alongside of friend Doolittle's man), and tell us where they live, and their prices, etc.?

S. M. HUMPHREYS.

Richardsville, Jeff. Co., Pa., Dec. 25, 1882.

Surely, friend H., your wants can be supplied near home, unless I am much mistaken. Who will give us a brief little advertisement of fruit-trees?

A TIN DIPPER IN LIEU OF A FOUNTAIN PUMP.

Last year I was at work for a farmer who had a few colonies of bees. One day we were told the bees were swarming. We hastened to prepare a hive, but before we had it in readiness for the bees we found, to our disappointment, they were on the wing. I immediately started for a pail of water to sprinkle them. My employer said it was of no use; but I meant to try. I did try in good earnest, for they started over a creek, and I managed to shower them nicely by the aid of a dipper. It caused great mirth among the other members of the family, to see me get so wet; but I was soon rewarded by seeing them safely landed on a low bush. So you see how just a little information saved a fine swarm of bees, and led me to investigate the mysteries of bee-keeping. My father and I took two swarms of a friend, and now they have increased to eight swarms, besides the large quantities of honey we have obtained. J. C. YORK.

Brookfield, N. Y., Dec. 4, 1882.

FROM 18 TO 54, AND 600 LBS. OF HONEY.

Last spring I started with 18 colonies and increased to 54, and I obtained some over 600 lbs. of honey, mostly extracted; and next season I shall have to handle about 94, if they live through the winter. I have packed mine in chaff. I use the Mitchell hive. To-day, the 22d, the bees had their last pleasure in flying around in the air. We had very cold weather here — 20° below zero for two days.

Ligonier, Ind., Dec. 22, 1882. J. C. MISHLER.

HOW TO MAKE LABELS STICK TO TIN.

I notice on page 187, April No., 1881, you recommend your readers to have their labels go around the cans, to make them stick fast to the tin; but what shall they do when the labels go but part way round? Well, after considerable trying I hit on a plan, which is as follows: I take borax, 1 part; shellac, 2 parts; dissolve the borax in boiling water, then the shellac, until it is about as thick as mucilage; now if you put this on your label, and the label on the can as you naturally would, without any further manipulation, it will, when dry, be sure to peel off; but if you just rub the label backward and forward a few times on the can with the palm of your hand, after the manner of making a glue joint with two boards, it will stick so fast when dry that you can't pull it off. JOSEPH MASON.

Wallace, De Kalb Co., Ill., Dec. 2, 1882.

FRIEND LOVEJOY PLEADS "NOT GUILTY."

In Dec. GLEANINGS, Mrs. T. M. Squire says she thinks R. Lovejoy, of Greig, missed it in letting those colonies of his starve in the spring. You also gave me a little sermon in July or Aug. GLEANINGS, in which you said any man who does not take care of his bees ought to lose them, and he must not find fault if God does take them, or words to this effect. Now, in justice to myself I wish you would insert this. I have kept bees five years, and never had but two swarms starve in the whole time, and I will own that I am ashamed of starving even those two.

DYSENTERY CAUSED BY UNTIMELY DISTURBANCE.

I think the cause of my losing them was, First, I had to move them out of the cellar two weeks earlier than I ought, and move them one mile on a wagon, which gave them a good shaking-up, and of course excited them a great deal. When I put them into the cellar they numbered 53 strong; and when I moved them out, about the middle of April, I put out 49, all in good shape but one, and that one died of starvation before I got them all moved. Of the 4 I lost in the cellar, two were killed by mice, and two died queenless. Out of the other 15 which died of spring dwindling, I saved 37 combs 11x12, and most of them were full of good sealed honey; so you see they did not starve, neither did they die by any neglect of mine, but they would fly out and get chilled. The trees and fences were covered with them, and the Italians died off worse than the browns or blacks. R. P. LOVEJOY.

Greig, Lewis Co., N. Y., Dec. 18, 1882.

A BEE-MAN IN TROUBLE, AND HOW TO HELP HIM.

I will send you a pair of woolen socks for a sample, to see whether you could use them. May be I have told you before, that I had a sunstroke last harvest, a year ago, so I am not able to do any thing outdoors since that, and not much in the house. I was not even able to tend to my bees this summer. It was nearly three months this summer that I was not able to walk out to see what they were doing; but they did well enough for the attendance they had. I got about 150 lbs. of surplus honey from 3 colonies, and increased to 5, so I got a knitting-machine, and work a little at that to make a living. They are paying me $4.00 a dozen in the stores here, and in one store $4.25; but they can not use them as fast as I can knit them, if I am able to work at it. So I thought I would give you an offer, whereby you could sell them at 35 cents (they sell them at 45 here). I would let you have them at $3.50 per dozen pair.

They are all wool, and the very best yarn that goes; so I hope you will try to do something for me, while it is all that I can do. C. P. IMHOFF.

Paradise Hill, Ohio, Dec. 16, 1882.

Now, friends, if any of you want a pair of woolen socks, here is a chance to get them, and help an afflicted brother at the same time. Those sent us are very nice, and I find that the postage on them will be only 4 cents; so all you need to do is to tell friend I. how many inches of "understanding" you have, send him 40 cents (you see this will give him one cent to get a stout wrapping-paper with), and he will just make them for you to order. I always like to help one who is trying to help himself, and I shouldn't wonder if we might make his heart glad before he hardly knows it. Let us watch for his report from the stocking business, next time we hear from him.

COMMENDATORY.

I am much pleased with GLEANINGS, as there is so much in it that is instructive to the bee-keeper, and those instructions are so plain they are generally easily understood. I must say, that I do commend "Our Homes;" that is, the spirit manifested, and trust it may be productive of much good.

OTHERWISE, AND SOMETHING ABOUT THE TOBACCO COLUMN.

It is no doubt very commendable, the spirit that prompts you to offer a smoker to those who stop the use of tobacco; but is it not disgusting to read those communications, informing you they have stopped using tobacco, and apply for a smoker? If they were poor, and not able to buy, it would seem different. Would it not be well to give a lesson in "Our Homes" on cultivating a spirit of manhood, self-reliance, in opposition to depending on others for what we can and should do ourselves,—especially to endeavor to do ourselves good in that which it is a duty for us to do, and not expect a sugar-plum because we try to be good children?

SOMETHING ABOUT "FRIEND."

Again, do you and some of your correspondents belong to the religious society of Friends? The oft recurrence of the word "friend" makes me fear that, unless you have a large supply of those six letters that constitute the word, that GLEANINGS, which has arrived so promptly this year, may fail, for want of type, to be ready to visit us as promptly as in the past; and — well, I don't know what would be the consequence. No disrespect to Friends is intended. I can trace my ancestry on my father's side, unbroken, to the time of George Fox, members of that society. D. BINNS.

Addison, Lenawee Co., Mich., Dec. 15, 1882.

Friend B., I do try to encourage a spirit of independence and self-reliance; but perhaps I have not dwelt enough on it. There are many men of many minds, you know, and what would have no effect on one would, may be, take right hold of another. I do not think it is the value of the smoker, but rather because it serves as a sort of binding of the contract, just as a man pays ten dollars down to bind the bargain, when he decides to buy some property. After the smoker is received, the receiver is in honor bound. One writer in this number, as you will see, sends me a dollar; and some time ago a good friend who thanked me for getting him to leave off tobacco, sent me a set of studs and buttons made of solid 18-carat gold. Meanwhile the work goes on, and more and more are giving up tobacco, as you will see by reading their letters.—I know I use the term *friend* quite often; but I don't think I use it unless I really have a friendly feeling toward the one I am addressing, and desire to have him feel the same toward myself. Oftentimes what I have to say might be taken unkindly, were it not for this little prefatory word, and I am sure the readers of GLEANINGS all know that I never use it unless it comes sincerely from the heart. If I am a Quaker, it is in spirit.

WHY FRIEND POTTER HAD THE BLUES.

Friend Root, I see from GLEANINGS it is fashionable for all bee-keepers to make a report to headquarters, so I shall endeavor to make a short one, and on a small scale. I commenced in the spring with 2 stands of hybrids, and increased to 9, and lost one swarm, all natural swarms; I took about 200 lbs. comb honey, and sold 3 stands for $21.00, and have 6 stands fixed up snug on summer stands, and well packed with straw; so I am not a fit subject for Blasted Hopes. But I had the blues once pretty badly when I undertook to take some of their honey, for the little fellows took it into their heads to have a spree, and I tell you they made it lively for 2 or 3 days. They cleared the yard of chickens, dogs, and every thing that undertook to cross the yard. They made me take to brush twice before I got the honey. I went at them with my little smoker, and that only made them more hostile, and I had to put on my screen and tie up my hands with gloves and rags so they could not reach through, and had to make a smoker by taking an old pot with a good bed of coals, and then piling on weeds and wet chips, and that made a smoke like an engine, before I conquered them. Now, friends, you say in GLEANINGS you can work with any bees, and hardly ever get stung. Now, I thought of you when I had that "brush;" and, not wishing you any harm, I would have given — a nickel to have seen you launch out among them. It is my opinion, you would have had to "brush" it, unless you had been well protected. J. L. PORTER.

Pleasant Dale, Seward Co., Neb., Dec. 20, 1882.

It isn't well to boast, friend P.; for folks who boast, often turn out wretched failures. But I would certainly have given another "nickel" to have been there and shown you how I would handle those hybrids, without any "screen" or any thing on my hands or face either, and I think I should have done it with the aid of a 50-cent smoker, and nothing more. Experience does wonders in almost any thing, and it does wonders in handling bees. I don't believe I should have got stung at all, for I should not have tried to open their hive or take away their honey until I had got them so perfectly subdued that each individual bee would have folded his hands and begged pardon. May be I am mistaken; but it seems to me I could do it with any kind of hybrids. If it were a colony of Cyprians, I shouldn't feel quite so sure about it; but if you will let me have the management of them right along, I think I could handle them also, and not get stung.

IS IT DYSENTERY?

I looked at a colony of bees to-day, and they are spotting the hive inside some. I do not know whether it is the first stage of dysentery or not. They smell a little strong for a clean healthy stock. It is in a chaff hive, but are packed on top of frames, or I wouldn't call it packed either. There are two thicknesses of burlap and one of carpet over them — the only one I fixed in that manner. They *appear* very lively. In half a dozen words, What do you advise? or am I making "much ado about nothing"?

WHY DO SOME COLONIES HAVE A STRONG ODOR?

What makes some colonies have such a strong smell when they appear in good condition?

MOLDY COMBS.

Do combs often have a kind of moldy appearance in the hive, in fall and winter? I take out one comb from each hive in fall, and spread in center for wintering in, and the combs stored away in other hives have a moldy appearance, as well as many among the bees. You can rub the combs, and nothing comes off to indicate mold.

I intend raising Italian queens next season. How early in spring can I begin, to be on the safe side? I would rather wait until swarming season, but I want them sooner, if I can get them good. Can I get two-thirds pure queens within a mile of a *few* colonies of blacks? Do you condense your apiary any for winter, or do you let your chaff hives stand just as they do in summer? W. M. YOUNG.

Nevada, Wyandot Co., O., Dec. 16, 1882.

I noticed one of our colonies spotting their hive around the entrance very early in November, after a heavy freeze; but to-day, Dec. 22, I find them all right inside, although the colony is rather weak in numbers. Their combs have the same blue or moldy appearance you speak of, but I have never found it to do any harm. A good strong colony of bees will have a rank, unpleasant odor unless they have abundant ventilation, and may be they will even then; but I am inclined to doubt it. In my greenhouse or cold-frame experiments, I found, by shutting off the ventilation, that the bees would soon fill the room with this strong rank smell, and finally spot the hives and furniture, if air were not given. I am inclined to think that plenty of air will do away with all the bad smell.—You can commence rearing queens when the bees are at work on soft maples, but you will have many discouragements and some bad luck that you will not have in June. The number of pure queens you will get with blacks near, depends on how many drones you keep in your own apiary. With lots of them flying daily, from almost every hive, you may get nearly all of yours purely fertilized, unless, forsooth, the black stocks all have thousands of black drones flying daily too. Don't you see how hard it is to give any kind of a definite answer to such questions, friend Y.? We never move our chaff hives at all.

OUR IMPROVED FOUNDATION, ETC.

I have never reported on your new style of fdn., such as I had of you last summer. I must say, it far exceeds your old style, and is much quicker worked out by the bees, having no hard wall. I did intend to get one of the machines. I have a Given; but if you can furnish me the fdn., in lots of 100 lbs., at 10 cts. per lb. over the price you pay for wax, as you did that lot (⅓ was thin), why, I will just let you monopolize the fdn. trade, and buy of you.

Birmingham, O., Dec. 11, 1882. C. A. GRAVES.

That must have been a special rate, friend G., and we could hardly undertake to do as well now. While we pay 25c. for nice wax, we charge, by our price list, 43 by the 100 lbs. for ordinary fdn. If made thin for sections, the price would be 10c. more, or 53 cents. These prices will only hold so long as we can buy clear yellow wax at 29c.

WHAT A YOUNG SCHOOL-TEACHER DID WITH HIS FIRST SEASON.

I am a young school-teacher, and an amateur in apiculture; and the results of the past season, although not as glowing as the results obtained by our professional bee-keepers, has made me an enthusiast in the science. I began last spring with six swarms, in fair condition; have increased by natural and artificial swarming to 22 *good* swarms, all in Simplicity and chaff hives, and I think in excellent condition for winter, on their summer stands. My honey product is as follows: Comb honey in 1-lb. sections and 4-lb. boxes, 884 lbs.; extracted, 249 lbs.; total, 1133 lbs. Average price per lb. realized, 16 cts.; total, $181.28. Besides allowing each swarm eight combs, I find that I have 69 extra combs, partly filled with honey. My expenses were comparatively light, as being a carpenter myself I avoided one great expense by making my hives and getting every thing in shape during my spring vacation.

ANOTHER OF THOSE "AWFUL HYBRIDS."

By the way, I must tell you what my "best swarm" did. It was hived June 5, and stored 297 lbs. in 1-lb. sections; 19 lbs. extracted, and an ample supply for winter. It was a hybrid.

I wish to get a foundation machine to make up my own wax. I will use all I have for sections. Now, do you think a 4-inch machine would answer my purpose? and if so, what machine would you recommend? D. E. STRATTON.

Bismark, Iowa, Dec. 11, 1882.

The 4-inch machine will answer all purposes, friend S., just as well as any other; and, in fact, it will, if any thing, make *thinner* fdn. than the larger mills; but you can make strips only 4 inches wide on it.—Your achievement for the first year is another proof that it is not so much age and experience that are needed to do well with bees, as it is real application and enthusiasm.

MY REPORT FOR 1882.

We had fine weather the last of March and the first of April. The prospects for a fine honey season were never better than early in the spring. About the middle of April we had a freeze that killed the fruit-bloom. From that time till the first of June was very cold and wet. I continued to feed till white clover commenced blooming; then I united until I had them all full of bees. I decreased from 30 to 19 colonies, and quit feeding. I soon found that would not do, for my bees were starving, right in the height of white clover. I commenced feeding again, and continued to feed until basswood bloomed. They worked only three days on basswood, on account of a cold rainy spell. That 3 days' work, with what they could pick up from stray flowers, lasted them till

BUTTON-WOOD

bloomed. There is a button-wood marsh only 1½ miles of me. My! what a rush they made every morning! and it continued until dark. They soon filled all the empty corners in the brood-nest, and went to work in boxes. The result was, that I soon had some nice button-wood honey. I think this was the whitest honey that I ever saw. As soon as that failed they went to work on red clover, and from that to buckwheat and blackheart. The honey season closed about the 15th of September. Increased from 19 to 26; got 50 lbs. honey per colony, spring count; half comb and half extracted; not a very good report, but I am thankful all the same.

SWARMING; CAN IT BE STOPPED?

Friend Hasty wished to heave a brick at some one for something that was not all O. K. I felt, last August, as though I should love to heave a whole hod full at the man who says you can control swarming by giving room in boxes, by extracting, or any other way that I ever tried, and I have tried every plan that I have heard of (except confining them in a dungeon), and some that I have not heard of, and *failed;* yes, *failed* won't express it. When the battle was over, and I had looked over the field, I found that I had lost three of my best queens; three colonies with virgin queens had gone to the woods. Next season I will try another plan, and report the result.

HONEY FROM WHEAT ONCE MORE.

I can not think that we need to have a frost to kill the wheat before it will produce honey; for three years past I have noticed bees working on wheat-stubble that was cut early. Some of our farmers think that wheat cut before it is thoroughly ripe, and stacked, will make nicer flour than if allowed to stand till ripe. (I am one of them.) In the early-cut fields is where I find the bees at work on a sweet sap that oozes out of the straw where it is cut off. It will last about two days. The bees will usually desert basswood to work on this sap, or honey. I can not tell what kind of honey it makes; the sap is as clear as water, and very sweet. I think it is the upward flow of sap to finish the starch of the grain, and is changed to glucose by the sun and air.

Whitestown, Ind., Dec. 20, 1882. S. H. LANE.

BEES COMING OUT OF THEIR HIVES IN WINTER.

I have 9 colonies of bees, and I am being troubled with their coming out. They are facing the south, and at the north end of them I have corn fodder stacked all along, and between them I have straw. I have a covering of old carpet, and that runs over in front, below the entrance. I also have the second story of the hives, which are the Langstroth, filled with chaff; and every warm day they come out. To-day, which is tolerably warm, I see some bees out of every hive. What I want to know is, how I shall manage to keep them in. I want to know if it would do to cover the entrance with a wire screen. Those that are out to-day are around the hives, and seem chilled, and can't get back. GEO. W. CREE.

Covington, Ky., Dec. 21, 1882.

I don't think it will do any harm, friend C. A few bees will always come out, and not get back, probably of old age. Perhaps you may have packed them too closely, and they are too warm. *Never* fasten bees in their hives when wintered out doors.

WHAT MAKE OF FOUNDATION IS BEST?

By the way, have you changed your mind about fdn.? I thought you considered that made on your own mills as good, or better, than any other; but it would appear from the report of the Michigan State Bee-keepers' Convention, that you now think the Given fdn. better. (See p. 793, *A. B. J.*) If the Given is best, I would rather have one of his presses, even if it cost a little more. A. G. WILLOWS.

Carlingford, Ont., Can., Dec. 16, 1882.

I did say, in substance, what was reported; but it was not *all* I said on the matter. All things taken into account, I would advise the fdn. made on *our mills.*

SECTIONS HOLDING ONLY ½ LB.

Do you intend to make ½-lb. sections for next season's trade? I intend to try the 4¼x4¼ sections about 1 inch deep; and I like your one-piece sections the best of any I have seen. If you make them of the size mentioned above, I shall be glad to buy of you. W. H. FRANCIS.

Frankfort, Mich., Dec. 20, 1882.

Friend F., I hardly know yet, what we shall make for a ½-lb. section; but we will make the kind you mention, for $4.00 per M., until further notice.

SHALL FRIEND E. GO OFF SOMEWHERE TO LEARN HOW?

I am obliged to request you to stop sending GLEANINGS. I have given up keeping bees in this locality, as it does not admit of a large apiary. It is with regret I have to make this request. I feel now just as though I should like to come over and work for you or almost any bee-keeper. I have had four years' experience. As soon as I can hear of any one who wants such a man, I think I shall be off, as I delight to work in the apiary. A. L. ETHERINGTON.

Milton, Queens Co., Nova Scotia, Dec. 12, 1882.

Don't go anywhere, friend E., but just keep right on where you are, and you will succeed in due time. When you do, we shall be glad to have your subscription again. I have had experience, and I know. Read the report from beginners in the back numbers of your old journals.

WHAT FRIEND STRINGER DID WITH TWO HIVES.

I commenced the spring with two hives; I went into winter quarters with 12; got 200 lbs. of honey; sold 3 hives; put back 4 swarms, and 2 got away. How is that for an A B C? I made all the hives I used, except 2. Last spring my health got so poor I had to stop work at my trade, and do light work at the mill, and I put in ten hours every day. Well, my bees began swarming on the 8th day of May, and kept swarming; so you see it was not long until my 2 hives were gone. I made the boxes mornings and evenings, and nailed the frames together after night. Flora helped me some. I do not say this boastingly; but as I see others telling how hard they have to work to keep things in shape, I thought it would not be amiss. I see some had to get up as early as 3 in the morning to be ready to ship bees. D. C. STRINGER.

Clinton Falls, Ind., Dec. 15, 1882.

BEVELING PLATFORMS FOR BUZZ-SAW TABLE.

Please tell me how you cut bevels or miters on your saw-table, described in last GLEANINGS. I should think it would have to be hinged the other way. It will not make Simplicity bee-hives, unless it saws miters or bevels. HENRY F. DOLSON.

New Paltz, Ulster Co., N. Y., Dec. 8, 1882.

Why, my friend, if the saw-table were

"hinged the other way," you see that the saw could not have free play. We have a temporary beveled platform which can be screwed to the table when desired. A description of this saw can be found in the A B C book.

A "FRIENDLY" LETTER.

Friend Root: — How natural it comes to say so! for I fancy every bee-keeper recognizes you as a friend the first lucky day he gets hold of GLEANINGS.

That is just exactly what I want him to do, friend Y.

Will you set your type-writer at work to answer a few questions?

HONEY-PLANTS FOR THE ROADSIDES.

What would you advise for the planting of waste places along the railway track? There are acres of such hereabouts in grass or weeds, and it seems a pity they shouldn't be covered with honey-plants.

For the purpose you mention, I think I would have Bokhara, or some of the other sweet clovers. I am told, however, there has been a strong protest in some of the States, by the farmers, because bee-men have sown sweet clover by the roadsides.

HORSEMINT IN CULTIVATION.

Monarda punctata — that's his name; he's the fellow I'm after; not for the railway, but for the garden. Can I get some seed, and hotbed it for a year or two, and perhaps acclimatize it even here, where your bee-hives get buried in a six-foot snowdrift? How would friend Carroll like that? Do you think it will hurt them — the snow, I mean? If it does, I can't help it; for I believe in chaff hives on summer stands.

Monarda, or horsemint, will grow anywhere, my friend, and I should not be surprised to see it thrive as well in Canada as it does in Texas. The great obstacle to its cultivation is, however, the rank, unpleasant flavor of the honey. If we could develop a variety yielding honey free from this objection, it would be one of our most promising plants. The more snow, the better; if I could be sure of having my hives covered with soft snow just as it falls, from fall until spring, I should hardly ask for any better winter protection.

If you were a beginner, and were a little nervous about your stock, whether they had enough to last them through, what would you do?

I would give them "Good candy," as directed in the Remindery of our Dec. No.

I had two colonies in the spring; increased to seven by division and natural swarming, lost the best swarm of the lot besides, and made over 200 lbs. of honey. Some of them, I know, have lots of honey; but some I am not so sure of.

But why did you not make sure of it, friend Y.? or, if you choose, why do you not make sure of it now? If I didn't know my bees had food, I rather think I should shovel off the snow and *s-e-e*, even if it is winter.

GETTING OUT THE WIDE FRAMES AND SECTIONS.

Friend R., why do you advise broad frames for sections? Bee-keepers don't swear, I know; but I am sure they sing sometimes when they have to pull ten of the "contraptions" out of a two-story hive, and scatter them all over the yard when they are getting down below, and have all kinds of trouble getting the filled section out. It won't do; they are too much trouble. We must have something a good deal easier. Do you keep ½-pound sections? [Yes.]

Your whole trouble in getting the sections out of the wide frames is because you don't go at it right. New hands are often wanting a hinged top-bar, or something of that sort; but no old bee-man has any trouble in the matter. In the first place you must wedge up your wide frames, just as I tell you how in the A B C. If you just hang them in, as you do the brood-frames in the lower story, of course you will have trouble; for your bees will fill the whole right up solid with honey, just as they ought to do, and then four yoke of oxen (if you will excuse the expression) might be unable to pull them out, without pulling the frames and honey all to pieces. The right way is to put in your frames, and wedge them over to one side—your wedges, of course, being between the other side of the hive and the separators on the last frame. As the space occupied by the wedge is about ⅜, of course no comb will be built in it; and when the hive is full, you can, by removing the wedge, have plenty of room in which to loosen and lift out your frame. After the frame is out, shake or brush off the bees; lay it down with separators uppermost, and then slip the whole frame from the sections; or, if only one or two are filled, take them out as directed in the A B C book. Now please bear in mind, all of you, if you just hang your wide frames of sections in the chaff hives, or Simplicity hives either, as you do the frames in the lower story, you will have lots of trouble, and may be more too.

B-E-E-S-W-A-X.

What shall we do for beeswax when the supply gives out? Do you think paraffine will ever take its place — in the brood-chambers, of course, for nobody is going to eat the stuff? Tell me truly.

If this Gatling battery of questions hasn't frightened you, we will expect to hear from you in January. Long life to GLEANINGS! can not do without it.

C. W. YOUNG.

Stratford, Ont., Can., Dec. 15, 1882.

I once gave my opinion as to what to do when we couldn't get beeswax; but some of the brethren almost "flew off the handle" about it, so I think I won't suggest any more. Paraffine is just as good to eat as beeswax, and a great deal whiter and cleaner. The worst trouble I know of with it is, that in hot weather it melts and lets the honey fall down. It is true, wires will fix it; but if I should advise *wires* in comb honey, I don't know but these same brethren would eat *me* up, instead of the paraffine, so I think I won't advise. At present, I think we shall have to scrape the surface of the whole earth for beeswax, and I think a silver knife will be about the best thing to do the scraping with. We are now offering 28 cents cash, and 30 in trade. Who will sell? Come again some time, friend Y.

HOW TO HIVE BEES THAT ARE TOO HIGH IN A TREE TO REACH.

Last summer I had a swarm alight on a large limb of a tree, 25 ft. from the ground. I could not climb very well, so I took a 16-ft. pole and tied a bunch of small beech twigs on the end of a pole so that the bunch hung by the string. Then I tied a good-sized broom of asparagus tops, and tied them on a pole, and then went up on a ladder 13 ft. and held the beech brush over the cluster, and let the end of the brush rest on the bees, and then began to brush off the bees with the asparagus broom. In about 10 minutes I had most all of the bees on the bunch of beech brush, and brought them down and hived them. I have 8 strong colonies; have had poor luck this year; lost 12 out of 16 last winter; have not got a pound of surplus honey this year. Last year I got 1100 lbs. extracted honey from four swarms and their increase. W. A. E.

Easton, Wis., Dec. 22, 1882.

Friend E., that is substantially the way friend Shepard's swarming-box is used, and I think a peck basket, or any similar thing, would do as well as the beech foliage.

GETTING SUBSCRIBERS AT A PUBLIC SALE, ETC.

I could not have got 10 subscribers if I had not gone to two bee sales. Mr. Hastings, who died some time ago, had about 55 colonies; they averaged about $6.00 in single 8-frame hives, but are in poor condition. Mr. Elys averaged $8.64 in same kind of hives, only part 10-frame, and in good condition. The extractor that you sent him last spring gave good satisfaction, and the observatory-hive you sent took first premium at our county fair, with an Italian queen and some of her bees. We consider you a "square man" at this place. E. S. ELLSWORTH.

Lawn Hill, Iowa, Oct. 18, 1882.

Notes and Queries.

FROM 15 TO 40, AND 1600 LBS. OF HONEY.

BEING an A B C, I suppose I ought to report progress. Last fall I had 15 stands of bees; this spring I had 15 stands. During April and May I fed $15.00 worth of sugar. Between dividing and natural swarming I now have 40 stands put into winter quarters. I took a little over 1100 lbs. in 1-lb. section boxes, and a little 500 lbs. extracted honey. P. DIEHL.

Davenport, Scott Co., Iowa, Dec. 22, 1882.

GLEANINGS makes such a capital "silent partner" that I can not do without it. CHAS. R. THOMPSON.

Ft. Omaha, Neb., Nov. 9, 1882.

I commenced in spring with 19, and increased to 40; doubled back to 37; got 700 lbs. honey.

MADISON TALBERT.

Morristown, Ind., Dec. 11, 1882.

THE 35-CENT GLASS PITCHERS, FOR HONEY.

Those last pitchers you sent are splendid. They hold just 4 lbs. of honey, and I sell them for a dollar, honey and all. C. FOWLS.

Oberlin, O., Nov. 4, 1882.

My report for 1882: I began in the spring with 17 hives of bees; got 1050 lbs. of extracted honey, 200 lbs. of comb in one-pound sections, and increased to 38 hives, all in Langstroth hives, in good order.

WM. COLEMAN.

Devizes, Ont., Can., Dec. 19, 1882.

MY REPORT FOR THIS YEAR.

I started in spring with 14 colonies; increased to 37, all in good condition for winter. I have sold 800 lbs. of comb honey; have 200 lbs. on hand yet. Nearly all sold at 20 cts.; *had a hundred dollars' worth of fun.* E. W. PITZER.

Hillsdale, Mills Co., Ia., Dec. 18, 1882.

Some thief stole the honey and spoiled a good stand of bees for me, containing a Holy-Land queen, one night this week. J. M. EPPERSON.

Moberly, Randolph Co., Mo., Dec. 10, 1882.

AN ADDITIONAL HINT ON THE STATISTICS MATTER; SEE PAGE 26.

Let each bee-keeper send in the report of any other bee-keeper who does not send in his own report. C. C. MILLER.

Marengo, Ill., Dec. 18, 1882.

From 100 colonies the season past, we took 4500 lbs. of comb honey in one and two pound boxes, which has nearly all been sold at 20 to 25 cents. We took no extracted honey. By artificial swarming we obtained about 30 new colonies.

OLIVER M. BROWN.

Winchester, Va., Dec. 19, 1882.

I have about 200 combs in frames 8½x18. I want to change to the L. Now, must I transfer the combs, or must I melt them and have fdn. made of them? They are drone combs. I got 70 lbs. to hive, and increased from 42 to 70. J. W. BRADLEY.

Columbia, Boone Co., Mo., Dec. 5, 1882.

[I would melt them, if drone comb, unless you can use them in the upper stories for extracting.]

TROUBLE AHEAD.

Bees are not wintering very well; they keep coming out in cold weather. They appear to be swollen, and have no power to fly; plenty of honey to winter on. If they continue at the rate they are coming out now, there will be none left by spring. Some are in chaff hives, some in straw hives, same as chaff hives. All are in double-walled hives.

Chardon, O., Dec. 18, 1882. CARLIE COWLES.

RATS AND MICE, IN BURYING BEES.

In Boomhower's way of wintering bees, what prevents the rats and mice getting into the hives when he sets them on the scantling, without bottom?

WILLIAM C. HOLMES.

McCartney's X Roads, Mo , Dec. 13, 1882.

[If the bees are buried some distance from any house, it is not very likely that rats or mice would ever find them, if I am correct. Will the friends who have buried bees, say if I am right?]

DYSENTERY; SYMPTOMS ALREADY.

I have 38 strong colonies of bees, with plenty of honey in chaff hives, but they already have dysentery badly. If they were yours, what would you do with them? S. F. NEWMAN.

Norwalk, O., Dec. 21, 1882.

[I don't know what to do, friend N., but to give them more ventilation. Put only two inches of chaff over them, or a single sheet of coarse burlap. I would also feed "Good candy," as directed last month.]

FROM 115 STANDS TO 200, AND 12,050 LBS. OF HONEY.

I commenced in the spring with 115 colonies, all except two in fair condition; took 12,050 lbs.; 500 comb, the rest extracted; increased to 200 colonies, and am satisfied. The spring was poor; but after the honey-flow started there was no let-up until frost. GEORGE BRIGGS.

New Sharon, Ia., Dec. 19, 1882.

[Friend B., that is what I call "business." I presume all were in one locality, though you do not say so. Over 100 lbs. each, from an apiary of over 100 colonies, is worthy a man's best efforts.]

SILVERHULL BUCKWHEAT.

I raised on five acres, about 80 bushels, on a gravelly, yellow-sand soil. It kept over 100 stocks of bees busy during its season, and they stored considerable surplus. The honey is not nearly so dark as old kind.
S. C. PERRY.
Portland, Mich., Dec. 8, 1882.

How many cubic inches should an average swarm of bees cover at zero weather?
C. H. BOYD.
North Monroe, Waldo Co., Me., Oct. 6, 1882.

[A rather hard question, friend B.; but I will hazard the remark, that I think a good colony can pack themselves in a sphere not over 6 inches in diameter. What do the rest think?]

A friend from Illinois sent me last September two queen-bees, with directions to put them in. I thought it would kill me, but I did it quite well. I now have considerable faith in myself. Both hives are sending out quite a number of yellow-banded fellows.
GEORGE W. WARNER.
Grass Valley, Cal., Nov. 26, 1882.

Although we had a very gloomy outlook for bee-keeping in May and June, we have had a very good honey crop here this season. I started in the spring with 35 colonies, which I had to feed through May and June; increased to 70, and gave nearly 2000 lbs. comb honey, 2000 lbs. extracted.
J. A. OSBORNE.
Rantoul, Ill., Nov. 27, 1882.

I began the season with six swarms of black bees and two nuclei of Italians; increased to 17 swarms, and took 1100 lbs. honey in boxes and two-pound sections. Bees are in Langstroth hives in open shed, packed in straw, with chaff cushion over frames for winter. This has been a fruitful season for honey.
Sigourney, Ia., Dec. 18, 1882.
L. McCOY.

SWARMING BY MOONLIGHT.

In last GLEANINGS you speak of night-swarming as new. The late Mr. Moon had a case once. I speak of it in *Manual*.
A. J. COOK.
Lansing, Mich., Dec. 15, 1882.

[Thanks for calling to my notice swarming by moonlight. I had overlooked the fact that you mention it, friend Cook.]

Here is my report: Commenced in spring of 1882 with 4 colonies; got 400 lbs. comb honey, mostly in 1-lb. sections, and increased to 11 good colonies. The fore part of the season was very wet and cold, and bees had to be fed through May. Most of the honey obtained was from smartweed, of very fine quality.
W. SHIELD, 11.
Muscatine, Iowa, Dec. 8, 1882.

BLACKS, HOLY-LANDS, ITALIANS, AND CYPRIANS.

I weighed the honey from four hives; black bees, 120 lbs.; Holy-Lands, 188 lbs.; Italians, 205 lbs.; Cyprians, 225 lbs., all extracted honey.
J. W. UTTER.
Amity, Orange Co., N. Y., Dec. 11, 1882.

[You see, friends, the Cyprians do *sometimes* get honey any way. Friend Utter has had a wonderful yield from all of his bees.]

GOLDENROD, THE EARLY VARIETY.

I see by Oct. No. of GLEANINGS, that J. H. Peirce, of Dayton, O., asks about the early variety of goldenrod that blossoms in July. We have this early kind here. It commences the last of July, but we never get honey from this early variety. We never get honey from goldenrod till the 10th of Sept.
JAMES B. MASON.
Mechanics Falls, Me., Nov. 2, 1882.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

I HAVE been a subscriber since your first number was issued, but did not think ten years had passed since that time till I looked on the cover of the December number. Put me in Blasted Hopes, for January, as my report would be 100 colonies in fine condition in spring; from them, 6 swarms and 350 lbs. extracted honey, which had to be made up in the fall with sugar. Bees lived on pollen and water while clover and basswood bloomed.
J. C. THOM, M. D.
Streetsville, Ont., Can., Dec. 6, 1882.

Friend T., you ought to be thankful for doing as well as you did. You did not gain any thing, it is true; but you are prepared for winter, which is better than some of your fellow-workers have done. Isn't it?

IMPORTANCE OF HAVING SOME OTHER OCCUPATION THAN BEES.

Another year has rolled around, and yet no honey, and only a few bees. I had 25 in the spring, and increased to 40; but the season was so poor that they did not gather enough for winter, so I had to double up till I had only 30. This was the poorest honey season here for many years. No bee-keeper got any surplus honey in this section; but I have seen some good reports in GLEANINGS from Ohio. How can it be that in so short a distance as that, one place is good and the other poor? White clover was abundant, and lots of other flowers. I thought I should do a good business with my bees this summer. They were in good condition in the spring. I made preparation to give them my whole attention; but if I had had to depend on my bees only, I should not have made a cent. But I have a small farm that gave me some pocket money; therefore I would advise all bee-keepers to do something else besides keep bees, for I think it is an uncertain business. But nevertheless, I stick to the bees. In the spring, when I set my 25 colonies out, I felt "kind o' proud." I thought I should soon be up to fifty. Well, then I got a kind of bee fever, and it grew worse till the last week in May, when I got a big "dose" of "bee powder," which checked it for another year. The "dose" was, that the bees began to kill the drones off; they just slaughtered them. I opened a few hives, and some had not a drop of honey, and but little brood; so I had to feed.

[Name and address to above, lost.—ED.]

As a rule, I do think it best for a bee-keeper to have some other means of supporting himself. I would especially give this advice to those just beginning. After you get to be an old hand at the business, and have enough cash laid up so you can afford to go through one season without any income, it might do to depend on bees alone; or, perhaps I should say, honey alone. At the present prices of queens and bees, I think a bee-keeper of experience could make a good living selling them alone, even though he had to feed every month in the year; but to do this he must not be cramped too much for capital, nor can he make many mistakes through inexperience or heedlessness. A little farm is a very good thing indeed to have, when honey happens to be slack in coming in.

Our Homes.

For dust thou art, and unto dust shalt thou return.—GEN. 3:19.

DID I never tell you that we have been, for almost a year past, planning and building a new home? Well, we have, though; and now if you were to look over a little beyond the apiary, right about where the artist has tried to picture the sunflowers, you would see a brick edifice that we are just beginning to call our home. We didn't mean to build so expensive a house, but it "sort o' grew," you know, as such things often do. After we sold our old home last spring, Sue and I talked it over, and agreed that we wanted just a modest little home; but at the same time, as there were now six of us all together in our family, we thought it better to have it large enough so we should not be cramped and crowded, even if some of our real particular bee-friends should make one of our family circle now and then. So we sent for an architect, and began planning. There should be a room for each one of the children, to care for and keep clean and tidy, and free from "dust;" and then we wanted a woodhouse, a kitchen, a pantry, a dining-room, a sitting-room, a parlor, and a parlor bedroom, and then we should be just comfortable. As it was to be the only house we should probably build in our lifetime, we wanted it good and strong. We wanted it made so it would not have to be tinkered and fixed up every spring, and so it would not very soon decay, and need to be renewed; for you know it is often cheaper in the end to have a good thing, even if it does cost a little more. I very soon decided that it wanted to be of stone and brick, with a slate roof; but Sue consented only reluctantly to the force of my logic. We had to decide during the busiest part of the season, on many points; and as we did not want you, my friends, to suffer for want of supplies because I was having a house built, many important matters were settled with very little thought and consideration. I picked out a picture of a house in the architect's book, and told him to make it like that, only have it brick.

I presume many of the friends to whom I am talking have much nicer homes than ours will ever be, and perhaps some have those not quite as good; but altogether, I think I occupy about a middle place in the great sea of humanity. In many respects I know I am comparatively a country boy, and perhaps behind the times in many of the modern appliances and comforts of civilization. I used to feel embarrassed and troubled when I went out anywhere and exposed my ignorance; but I don't so much now; for when I am working hard, and trying to do right, I know I have my Savior's love; and why need any one feel troubled and be afraid, with the consciousness of the presence and nearness of such a mighty friend as he? Still, I want to be able to do as other people do, and I do not want to pain any of my many friends by a lack of proper pains in my dress, or the appurtenances of my home when they come to see me. I feel pretty sure, as I think of it to-night, that many times I have not dressed quite as well as I should have done, for one in my station; and I fear, too, that I have given pain to dear kind Sue by objecting to little improvements she wanted to have made about our own home, where we two have passed so many pleasant hours together. I know she will forgive me, for she always does; but I was going to add, that I have almost all my life been guilty of a little fondness for being considered eccentric. I am sorry for it now, and I want to get over it. When I was a small boy I refused to wear a stand-up collar (as everybody else did), even at a sister's wedding; and no doubt I gave this same sister much pain by wanting to be excused from being present at the ceremony, because there was a "'lectricity show" in town that same night. Well, I fear it was a remnant of the same defiance of custom that has prompted me to refuse to wear a necktie for several years past.

While at the convention in Michigan the matter came into my mind, and I took the trouble to look, and every brother present wore a necktie, except myself. I went out straight and got one, and for a few days back I have been quite in the habit of taking a look in the glass, when opportunity offered, to see if I presented an appearance that my grown-up son and daughter, and even other friends, would not feel ashamed of. I tell you, my friends, there is quite a number of us who can be better Christians by looking in the glass a little oftener than we do. God meant us to make ourselves pleasing in the eyes of others, so far as we can consistently. In just the same way, he wishes us to have pleasant and attractive homes.

The new brick house had a splendid cellar and an excellent foundation; and ere long I saw brother Munger, the boss of the mason-work, down in one side of the cellar laying a piece of nice smooth sawed flagging.

"Friend Munger, what is that for?" said I.

"This is for the ash-pit."

"What is an ash-pit?" said I.

I don't remember what reply he made, and very likely somebody wanted me over at the factory, so I didn't find out; but the next time I came around I found a small brick room, with a partition through the center, built on that nice smooth flat stone, and this was carried up to the room above. Over it was put a fireplace, or a place for a grate, and then a passage-way was also made into the room above, for a similar grate was to be placed there. The lower room was for the parlor, and the one above for the parlor bedroom. You see, the ashes would all fall from the fire into this nice fire-proof ash-pit in the cellar below; and instead of carrying ashes down stairs to be hoisted out into the streets to blow into people's eyes, and everywhere else, they just tuck themselves away down cellar into the pit, that will hold a wagon-load or more, from whence they can be carted out on to the land, or wherever wanted, once or twice a year, as need be. Not only does this avoid all dust or litter from taking up ashes, but the thrifty housewife, when sweeping the floor either in winter or summer, need never use a dust-pan, for she can sweep it all right under the grate, and let it fall into the ash-pit, in the cellar. Still one thing more: Doctors tell us that no means of ventilation has ever been devised, equal to the old-fashioned fireplaces that take all the air in the room up the chimney with a rush and a roar, at the same time they dispense heat to the rosy-cheeked, healthy boys and girls gathered around. Whether a fire is burning or not, air is almost always going up the broad open chimney; and if one should be so thoughtless as to shut all the doors and windows when going to sleep at night, the open fireplace does its duty in bringing about a regular and constant exchange of air in the room. Stoves may do something the same; but the air from a heated room is not good. Don't I know? Listen: —

I have always a dread of riding in the cars when the weather is cold, for I am pretty sure to get a sort of sickness that has a kind of nigtmare horror to it. When returning from the recent convention, during the zero weather in the fore part of December, I had a taste of it. As the stoves are what seems to be the offensive feature, I always get a seat in the middle of the car, if I can. I do not know whether they have tobacco spittle dried on all the stoves in cars or not; but I have sometimes got a way of imagining they do, and after I have breathed the peculiar burnt air they give off for about so long a time, I get poisoned, and sort of half-way crazy. Without being asleep at all, frightful dreams, as it were, run through my imagination as a sort of under current. If Satan and his allies are tobacco-chewers, and pass away their time in sitting around a rusty red-hot stove on which they from time to time squirt tobacco-juice, — well, if I were to go among them, I would rather not stay very long. One reason why the word Christianity is sweet to me, is because it seems to speak of pure air and clean people.

We arrived at Elkhart. The depot buildings were beautifully built, and are finished in hard wood, just as our new house is; but, oh what a place! Even in the ladies' room were great tin pans for spittoons, so full of green filth that matches and bits of paper were swimming around in it. The stove was red-hot and rusty, and gave off that same burnt smell. I went and stood in the open air, so full of frost that it pricked like needles, then I went back and sat down by the stove again. I presume these rooms see droves of tired travelers; for although I should judge the building was comparatively new, the floors, door-latches, and seats seemed worn by much and constant use. Money had been expended plentifully, but no one seemed to have charge of the rooms who was alive and thorough, or who had the spirit of Christianity at heart, to prompt him to think of the comfort of these neighbors who, perhaps, waited only one hour as I did in these waiting-rooms. May God help in this great problem of securing cleanliness and purity, not in our homes only, but for those who travel! I got on the train again, and the craziness commenced. Happening to glance toward the forward part of the car, all at once it seemed to bend down, as if it were diving down into the ground. You need not laugh, for I have heard of people who saw the ground jump up and strike them in the face. But it wasn't any thing I had drank that made the cars start to run down into the ground. It might have been the effects of tobacco; but if it was, it was taken under a most emphatic protest. I raised a window and drank in the pure icy air; but it only partly answered, and made my neighbors uncomfortable. "Lord, help!" welled up from my heart, as it always does in any trouble, and a way was opened.

I shall have to make a little confession right here. A sleeping-car costs $2.00, and it has seemed to me that a strong healthy man like myself would be acting selfishly in using that sum of money for such a short ride. You are sending me money freely, and I ought to use it wisely. I do not feel that I have any right to any better lodging or fare than the average bee-keeper of our land. The case was, however, a little different just then. I felt pretty sure, after my brief prayer, that almost any one of you would say, when the cars got a trick of "ducking" down into the ground, "Brother Root, go and get a sleeper; never mind the $2.00."

You see, I had been away from home for three days, and there would be a "power" of work to be done when I got back, and if I didn't have my brains "at my fingers' ends" next day, it might cost me a good deal more than $2.00. When I opened the door of the sleeper I was a little staggered to find myself in tobacco-smoke again; but back of this I came into an atmosphere that seemed like a spring morning compared to that where I had been. A good-natured porter, who wasn't patronizing, assured me that, no matter how far the mercury went below zero, no one would be uncomfortable in that car, which was a new one of the latest pattern. It was warmed with water-pipes; and while there wasn't a particle of dust, smoke, nor any kind of disagreeable smell, the air was as soft and balmy as summer. The bedding was as sweet and clean, and as well aired, as that in my own home; and in the retirement of my berth I could kneel and thank God, as earnestly as I prayed for help but a few minutes before in that suffocating car.

I awoke in the morning bright and fresh, with no trace of any unpleasant feeling or headache, even though I had been riding all night. As I was up before any one else, I had ample time to carefully note the conveniences of the wash-room while I leisurely made my toilet. If the combs and brushes had ever been used before, they bore no traces of it. After I had finished, the obliging porter asked me if I would not prefer to sit in the smoking-room. He didn't know me, and I didn't know him, you know; but after a while we both found out who the other was. When he found out that I did not like tobacco he pulled a knob in the wall, and out came the prettiest little seat you ever saw; and after it was out you couldn't see the place it came from either. While I sat on this seat, he "tidied up." After I saw how he did it, and the neat way in which he put all his things in their place, I began wondering how much one would have to pay a man who could take care of things thus. Why don't they have one in the station at Elkhart? It is because the money isn't forthcoming. That elegant car cost money too, and I presume they received a hundred dollars or more for the use of it that very night. Was it worth it? My part of it was worth the $2.00 I paid, under the circumstances.

I know we are dust, and that to dust these bodies must return, and that is one reason why I believe in shaking off the dust that is so prone to accumulate, that the image of God that is in us may shine out for a light to the world.

A few years ago the dust in our saw-room became so oppressive to the hands working there that we purchased, at considerable expense, a blower to draw all the dust from the buzz-saw tables, and throw it in a room below, near to the grate under the engine-boiler. The man who furnished it happened to be present at our noon service. I explained to the hands what it was for, and its object, something in this way: —

"I would say, especially to the boys of our establishment, that Mr. Gray and myself have for some time been trying to devise a plan for getting rid of the dust in the saw-room, because we fear it will prove injurious to your health. The gentleman whom you see with us to-day understands how to do it, and I am glad to be able to tell you that a machine is to be sent us in a few days that will do the work effectually. Now, I want to say to the boys that there is something else that troubles me, even more than the sawdust. It is something I am more anxious about than I am of your health even. It is a kind of dust that will bring ruin, devastation, and death, not only to the body, but it will bring ruin and eternal death to the soul as well. What I allude to is markings of obscene words and pictures on the walls of our out-buildings. Now, if I go to the pains of having it all sandpapered off, and painted over, we shall surely have no more of it, shall we?"

The Bible says, "Blessed are the pure in heart, for they shall see God." Would any one ever want to see God, while such foul thoughts were in his mind?

The examination of that new sleeping-car has, as I think, been a good lesson to me. I often think of it in planning the arrangement of our new home. While thinking of it just now, I went and washed my face, combed my hair, what there is of it, and "adjusted my necktie." Do you not like to see old people neat and tidy? Well, if God is willing, you and I will soon be old people, at least some of us. If we can't all have expensive homes, we can at least look clean, and, as a general thing, have the dust all brushed from most of us. I have sometimes thought cleanly dressed children are more apt to be quiet in manners, and pure in their talk. I wonder if it isn't so with older ones.

I heard of an old miser who died a few days ago. On going over his premises, things were found just as they had accumulated for years back. Dust lay inches in thickness, and grain was found, bushels and bushels of it, that had been stored away for years past. Though living, he was dead to business and dead to industry. It worries and frets me to see dust collecting anywhere. It is to me an emblem of death and decay. It indicates carelessness and neglect. Once in a while I find goods stowed away where they ought not to be, overlooked and passed by, nobody knowing they were there when wanted, and of course covered with dust. We found a lot of cans of honey in that shape this morning, covered with dust, and the labels faded, stained, and about as forbidding in appearance as they well could be. Have you any thing of that kind about your house that might have been turned into money just as well as not, months ago? Is that the way large business houses are carried on? To be sure, it isn't. Dust is a foe.

Saturday is usually a busy day with us. If it is during a muddy time, more or less Medina mud is tracked over the building by busy clerks. Sometimes I have occasion to pass through the building on Sunday. The deserted rooms look sad and lonely in their unusual stillness. They are cold, too, and chilly; and when one lays his fingers on a desk or counter it leaves a mark, for dust has accumulated in one short night. In the morning the room is warm, and a busy clatter is heard. There isn't any thing on the desks now that will leave a mark, for the women folks (they have been at swords' points with dust since the time of Eve, I believe) have been swinging their dusters around. Sometimes when I get weary I tell Sue I should like to go off in some great woods, and keep bees all by myself; but she quickly replies, "Now, you know you wouldn't like to do any such thing, for you couldn't live one day without a whole lot of boys and girls around you," and I guess she is right, after all. With them I have lived, and with them I shall fight against dust and decay, so long as God shall give brain and muscle.

A dusty store is an abomination; and dusty goods, shelves, and counters, will drive customers away, in spite of the inducements other things can offer. Honey in the most enticing cans, or packages of comb, won't sell, if you let dust cover it over. In the counter store we have some large stamped dish-pans, made without joint or solder, and retinned so they look almost as bright as silver. At the time the honey ran through that car I took one of the largest size, and used it to catch the honey. Before it was emptied and washed it got scratched, and its luster dimmed, somewhat; but it was hung up with the rest in hopes it would soon sell, so we could then hang up a new bright one. After several months had passed, and it didn't sell, although other sizes side by side were going off rapidly, I told Sue about it, and she said she would have that one, for it was just exactly as good to use. A new one was hung up, and they bought them so fast the whole stock was gone before I could get on more. Then, rather than have the place vacant, I hung up the dimmed one again.

Is the world to blame, because they insist on having bright clean shining goods? In one sense they are not, and I rejoice to feel that now in this day and age there is a great call and cry for bright, clean, pure men and women. They are wanted unsullied or tarnished with any uncleanness. Dusty Christians are at a discount. Cleanliness and freedom from dust costs money nowadays. If you don't believe it, go into any of our cities, and try the cheap hotels and low-priced boarding-houses. I by no means wish to blame them; they evidently do the best they can under the circumstances.

To keep the dust brushed off requires more help, and it also requires more expensive help. The man or woman who can build a fire in three minutes, and not leave any traces behind, even to the keen sharp eye, costs quite a little more than that one who "don't know how to do any thing." Still further, cheap help is almost always help with bad habits. Men or women, clean in body and pure in heart are so eagerly sought for that you must pay a price for them. This is getting to be the case everywhere.

A remark was made a few days ago, that religion is now getting to be a thing of common sense, instead of senseless rites and superstitions. When one unites with the Church nowadays, everybody expects him to be clean. People are getting to think as did Solomon, the wise man, when he said,—

> When thou vowest a vow unto God, defer not to pay it; for he hath no pleasure in fools: pay that which thou hast vowed.—ECC. 5:4.

When it comes to hiring a minister, we want him just like that dish-pan, if you will excuse the comparison. No dustiness wanted here. He must be clean and bright. "Not slothful in business, fervent in spirit, serving the Lord." Is it an easy matter to be a minister, and get, say, $1500 or $2000 a year? Not very, I tell you. I know pretty well what some of them do, and what they have to do. If you or I were held up before the broad daylight of public gaze and opinion, and expected to shine like the new dish-pan, with undimmed and "dusted" luster, year in and year out, we should break down and give up in the outset. How can one be expected to lead the bright trained minds of the present hour, unless he is up and dressed in all the arts and sciences, as well as the leading events of the day? He must not talk and make a parade, but he must live an honest, self-denying life, forgetting self while he is shaking the dust from the dusty crew all round about him. Not a speck of selfishness or weakness must be visible anywhere, and nothing must be left undone that falls within his province. His pure life must preach constant sermons, or those he delivers from the pulpit will be of little avail.

When I commenced to write these Home Papers I used to get somewhat disturbed by the letters that came now and then from those who said they had always learned to look out for those men who mix religion and business. I didn't quite feel like telling them that, although others might be insincere, I wasn't. In fact, that would be just about what the "others" had said also, if they were not sincere. I finally decided that it wasn't best to say much of any thing. I think I told one or two to wait a little before they passed too severe a judgment upon my ways of doing things; and as they were mostly new subscribers who wrote thus, I proposed to return the money they had sent me, and leave them to pay or not as they chose, after we got a little better acquainted. After doing this I just made up my mind,—yes, and I prayed God to help me too,—to keep my character and reputation as it stood before the gaze of these critical ones, free from dust and specks. I made up my mind that, with God's help, I would try to keep just like that new dish-pan, just out of its paper wrappings. I don't mean that I did this to convince them they were wrong, nor because I wanted folks to stop and admire my "tinware." You know I did not, friends. I worked hard because the Bible I had learned to love said, "Blessed are the pure in heart, for they shall see God;" and while working and praying I did see God, and had glimpses of his great love for all who were trying to please him. I don't mean to say I made a clean record, for my best friends all know what bungling work I often made of it; but you saw I was trying, and God saw I was trying, and you and he both seemed to take the will for the deed, and you have all, and are now, wondrously kind to me. Since I have chosen Him for my shepherd, friends I have found without number, and that, too, even though I am but of the commonest dust.

Lest I leave the impression that we would advise everybody to have grates instead of stoves when building, I will add that, after the building was all up, after discussing the matter a great deal, we decided to have grates in each of the seven rooms. Although no provision had been made for them when the chimneys were built, except the one chimney already mentioned, we were told they could still be fixed so as to carry the ashes all down into the cellar, etc. It is done; but our mason assures me now that it would have saved me $100 had I decided on this course at first, and had all the chimneys made accordingly. Furthermore, they won't burn any thing but soft coal; and when Sue's critical eye discovered flakes of black here and there around on the window seats, just recently painted and varnished so nicely, she has had a great longing for her old stoves that burned only wood, at the old home. I fear, too, she has had a pretty big longing for that old home, humble though it was.

The boys are home from college, and by accident proved to be the first occupants of the new building. Christmas day Sue went over and thought she would set their room to rights. Some way the ashes and coals had wandered almost all over the room; and before she got it all swept and dusted up according to her ideas, she got pretty tired and somewhat discouraged. The next day I went over with her, and, lo and behold! things were in a worse fix than the day before. Was the house haunted? The ashes had strayed out again, and even unburned coals were crunched into the new floor over a great part of the room. The paint was also knocked off from around the fireplace, as if somebody had been shoeing horses in the room; and one might also have imagined the horses were young ones, and a bit uneasy too. If I remember rightly she cried a little, and I think I heard her telling Mr. Gray, that she would give a whole "thousand dollars" to have every grate taken out of the house, so it would be clean and new, as it was before they put them in. It happened that, instead of "colts," it was "Jacob," and the youngest one of the "Canadians," who spent their Christmas evening in the new house, and, not having had much experience in "dust," or *coal* fires either, they essayed to break a large lump of coal *before* they placed it on the grate. They have promised to "do so no more," and Sue and I knelt together that night and asked the dear Savior to give us faith that he could bring *good*, even out of those grates; and now, whenever "we children" want to bother mamma, or test her ability to look cheerful "under fire," we simply say "grates." Reader, is there any thing that you feel badly about at your house? Well, then you know how to pity us. May be we shall like the grates after all, even if they don't look as nicely as they would have done had we been wise, and had the house planned for them when it was made; and in any event we are going to try to put our trust in Him who said,—

> Come unto me, all ye that labor and are heavy laden, and I will give you rest.—MATT. 11:28.

Tobacco Column.

I HAVE quit using tobacco. I want no smoker; I feel more like giving you a smoker than asking one from you, so here is $1.00 for you in place of a smoker. Bees have not done much here this season; the honey that we did get is dark and rather strong-tasted. JOHN JOHNSON.

Malvun, Ont., Can., Oct. 6, 1882.

Well, I declare, friend J., you are a novelty, any way. May God bless you in your resolve; but I really don't know what to do with the dollar. Shall we not place it to your credit, against a "rainy day"? Seems to me things are getting upside down, or something, when the brethren stop tobacco and then send me a dollar because they are glad.

You may place me in the Tobacco Column. My friends say I am entitled to a smoker. I needed one the past season. I have quit the filthy weed, and intend that part of the means spent for tobacco shall go to forwarding Christ's cause in the future.

M. A. DICKSON.

Brownsville, Ind., Nov. 16, 1882.

I have been a constant chewer and smoker for seventy years, until last fall, when I resolved to quit the use of tobacco altogether, and I have neither chewed nor smoked a particle of the weed since; and by the help of God I never expect to taste it again while I live. I did not ask you for the smoker when I quit, nor do I ask you for it yet. I thought it would be better for me to quit without any reward. JOHN STEVENS.

Lynchburg, O., Dec. 3, 1882.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, JAN. 1, 1883.

He trusted on the Lord that he would deliver him.—PS. 22:8.

AS wax doesn't seem to come in very fast, we will, until further orders, pay 28c cash, or 30c trade.

UNTIL further notice we will pay 10 cents each for March numbers of 1882. Put your name on the wrapper and drop us a postal.

AS wax is liable to advance, foundation will probably advance, and makers of fdn. wish it understood that the prices may advance at any time, without previous notice.

THE woolen stockings mentioned on another page can be sent from here, if more convenient, and where our friends are ordering goods, of course the postage can be saved. Price 35c.; if wanted by mail, 5c more.

WE have had one stalk of blue thistle in our garden this past year, and it seems to promise finely. It is always covered with bees from daylight until dark, for many months. Its unfortunate name is the only thing I know of against it.

IN our report of the vice-presidents for the coming year at the National Convention, we made one more mistake. We gave the name of Judge Andrews, of Texas, when it should have been W. K. Marshall, D. D., Marshall, Harrison Co., Texas.

WHERE you are owing us little balances that you do not wish to get a postal order or draft expressly for, but prefer to send it with next order, we have no objection to your so doing, providing you give the book-keepers notice by postal card, so they will find the matter taken care of when they make their monthly "voyages" through the ledgers. It will lighten their labors very materially, and I tell you it is no small task to look after a wayward family of about *ten thousand*.

SUCH heaps of matter have come in for GLEANINGS within the past few days, I have been positively unable to read it all, much less find a place for them in print. A good many of them, I notice, are plans for honey-houses. No doubt we shall get out a good one during the season, but I hardly know whom to give the hundred dollars to, for it will probably belong to a great many. The juveniles haven't tried to build honey-houses, but *I tell you they* have taken good care that their paper shall not stop for lack of matter.

WE commence the new year with 3632 names, which is almost a thousand more than we had at this time last year. During the month of December we have received 451 renewals, and 354 new names. My kindest thanks to you, dear friends; and all that worries me now is, that I may not be able to properly look after the wants of so many of you. A thousand is a pretty big addition to a family all at once, you see. Guess I'll have to give you all honey, as we do down in the lunch-room, and let you "slide" at that.

EARLY-AMBER sugar, it seems, has taken a new start. When in Kalamazoo, Prof. Cook said they now made it as white as granulated sugar. I asked him to send me a sample, but he said he might just as well dip it out of the bowl before us, for it was one and the same thing. This is truly good news. If any one can tell me where they are able to refine it to that degree, I shall be glad to get further facts in the matter.

AGAIN this year we are receiving cards like this: "Don't stop my journal; keep it going. I have subscribed through ——" My friends, we would willingly trust you, or we would accommodate in almost any way; but when we send anybody goods they must be charged somewhere; and when the pay comes, somebody must be credited. If we charge it to you, and somebody else sends us the money, how shall we know whom to credit it? We can't see any way to fix it, so you can send the money to somebody else which you are owing us.

LABELING FILLED SECTIONS.

WE have been considering the matter of grading sections, as you know, but there are some considerable difficulties in the way, to say nothing of extra handling, etc. A new feature has just come up: Put a nice label (something like Jones's, that won't soil) on all the dark or rough-looking ones. It is not a very great task, after they are all filled with honey; and as this label must go right to the consumer, it can easily tell him whose honey he wants to call for next time he wants some. Who will give us a design for a neat one?

EVERY little while some friend wants to know the price of a thousand circulars; and when told they will cost, say, $6 00, he sends $3.00 for 500. It can't begin to be "did," boys. Don't you see we should have all the type to set, any way? and to run 500 more through the press is but a trifling matter. If 1000 cost $6.00, 500 ought to be at least $5.00. Another friend sent 50 cents for a hundred labels with his name and address on. The clerk wrote back that we couldn't put name and address on for less than a dollar, of the kind he specified. His reply was, that if we couldn't print 100 for the 50 cents, print as many as we could for the money, and send them along. The point is, that the 50 cents wouldn't pay for setting up the type, etc.

THE SQUARE LIST.

ANY one conversant with the history of our laws knows how vainly we have tried to stop intemperance by legislation. Time and again some new plan or measure has been adopted and tried, only to find it didn't work well in all cases, and so it was dropped and some other measure tried. It is proving much the same with the plans we have been trying for years past to restrain unscrupulous (or unlucky, if you choose) brothers from buying supplies, bees, or honey, that they can't pay for. Whom shall we trust? is still the unsolved problem. In the Black List I tried to tell whom you should not trust, and in the Square List I tried to tell whom you might safely trust. Neither one worked as I expected it would. Procrastination has proved a more troublesome sin than dishonesty. Some got into the Black List only because they were too lazy to keep out, and eventually paid all up, and more too. Some got into the Square List who were so lazy, if nothing worse, that they had no sort of a right there. While it is my duty to publish promptly the name ef every man who is laying plans to get money without any intention of doing as he agrees, I can not see that it would be right to publish the names of those who buy unwisely, and then can not pay. We will do this, however: When you are in doubt, drop us a postal, and our book-keepers will tell you in a few words the habits of almost any man in the bee business.

"Remindery,"

Or Department for duties to be attended to this month.

SEVERAL have written about the bees coming out of their hives when it was so cold they could not get back. For a colony containing many old bees, I believe this is nothing very unusual; nor need it be regarded as alarming while the numbers are few that thus perish, say half a dozen a day, or such a matter, for a bee, when he feels himself to be of no further use to the populace, usually takes himself off out of the way with the remaining strength he has, and I don't know but that this happens oftener in a good strong healthy colony than any other. Still, we must face the fact that colonies do sometimes winter, with scarcely a dead bee either outside or inside of the hive. Perhaps such have only young bees. Who can enlighten us? Another thing that may make the bees come out and die, may be too much ventilation, with too small a cluster of bees. I saw bees tumbling around on the snow in a kind of a dizzy way, before one of our hives in November, and upon examination I found them to be a very small cluster, in the ends of just a few combs containing solid sealed honey. They had got chilled through, and had the dysentery. A larger cluster, milder weather, or a smaller chamber to cluster in, would, I think, either one have checked the trouble. There is still a third cause for bees coming out when they ought not, and I do not know but that it is one we ought to consider more. You all know of the reports we have had stringing along for two years, indicating plainly that bees went through the severe winter of two years ago with the hive cracked from top to bottom, or with the honey-boxes all on, when whole apiaries, nicely packed, didn't. I fear we are putting too much chaff over our bees, or putting it in cloth sacks that are not open enough. Some covering is surely needed over the cluster; but I am inclined to think that a heavy colony will do better with something pretty loose, rather than too many warm pillows — friend Muth's straw mat, or two inches of chaff spread over coarsely woven bagging or burlap, for instance.

Lastly, bees will have the dysentery, and come out of their hives on the snow, when wintering on natural stores, when they would do nothing of the kind on stores made of granulated sugar. If they still have the dysentery when every thing else is all right, make the Good candy, as described last month, and put it right over the cluster, so they will eat it instead of the honey stored in their combs. In making it for such a case, I would use only the best clover or basswood honey, to mix with the granulated sugar. In regard to disturbing bees in winter, I would open the hives only when the bees were coming out themselves. In the cellar, if your cellar is all right, you can open the hives by lamplight, and give them feed at any time, although many good authorities think it best not to disturb or stir them up at all in the winter. Never fuss with bees needlessly during the winter. It will pretty surely start them to rearing brood if you do, and this is seldom to be desired in winter. If the weather is so warm the bees are flying, the case is different; but even then I wouldn't take out the frames, unless you have some pretty good reason for so doing.

KIND WORDS FROM OUR CUSTOMERS.

Please send me by mail a copy of A B C in cloth. I thought I knew mine by heart, and gave it away, but find I can't get along without it. My credit with you is more than enough to pay for it.
New York City, Nov. 24, 1882. **F. D. CLARK.**

The nucleus arrived all safe. I don't think there were a dozen dead bees in all. They appeared to be very gentle bees at first. They are pretty cross at present. We have got over 100 stocks, Italians, hybrids, and common bees, at present. They are the crossest in the whole lot. Expressage to Marysville, $2.80; 20 cents by stage out here; $3.00. in all.
WILLIAM THOMPSON.
South Butte, Cal., Nov. 11, 1882.

I have sent to you several times, and I am always astonished to see how you can sell so good an article for so small a price. We have several hives of bees, and they increase very rapidly every year. I work with them mostly, as papa is always in his store. I like to work with them very much, so long as they don't get mad and sting. I have 2 hives myself, and I sold seven dollars' worth of honey from them last summer. **HORACE L. BARLOW.**
Refugio, Texas, Nov. 7, 1882.

KIND WORDS FROM NEW ZEALAND.

This is the beginning of the honey season here; my bees are hard at work on the willows and early fruit-blossoms just now. I find GLEANINGS a very interesting and useful paper, and I seem to never get tired of reading it, and I think that my wife has got the bee fever now through reading it, for she used scarcely to notice the bees before, but now she takes quite an interest in them. I saw some copies of labels in one number of GLEANINGS that quite took my fancy. I should like to try some of them, if they could be sent by post. We can not get any thing like them out here, not for three times the money. **JAMES ADAMSON.**
Hastings, Hawkes Bay, N. Z., Sept. 7, 1882.

I have been borrowing GLEANINGS for the past year, and like it very much. No bee-keeper can afford to do without it. Please accept thanks for the A B C, which I obtained of you last summer. It is the best help to those engaged in bee culture I ever saw. We have 30 colonies of bees now, all packed in chaff, ready for winter. I have wintered successfully for two winters past. I think there is no trouble in wintering bees, if they have plenty of young bees and good honey, and are warmly packed in chaff on their summer stands, with a passage over the frames. I have been much pleased with the success you have had in the Tobacco Column. I think it is almost equal to the temperance cause. May God help you in the good work you have begun, and prosper you in your business. **O. G. RUSSELL.**
Afton, N. Y., Nov. 13, 1882.

Now, friend Root, I am afraid you have made a mistake this time. May received her book all right, and the children are all so well pleased with it they are all wanting to write you a letter, even the little one that can scarcely talk plain. Now, what would you think to get five letters from one family, all under eleven? I rather think you would wish you had not made that offer to the little folks. When GLEANINGS comes, the children must see it first, and they invariably turn to hunt for the cartoons and Home Papers. **MRS. J. A. COCHRAN.**
Sherman, Texas, Dec., 1882.

[If I got five letters from one family, my good friend, I should think my juvenile project was working most beautifully. *By all means*, let them come, for it was the Master who said.—

"Suffer the little children to come unto me, and forbid them not; for of such is the kingdom of God. —MARK 10: 14.]

As God is our universal Father, I feel constrained to call you "brother." The A B C and Dzierzon Theory you sent me arrived in good order. I have traveled through the Dzierzon Theory with much pleasure and have commenced the A B C with the prospect of being a better man as far as bee culture is concerned, to say the least, by the time I get through with it. I have already perused several articles, which have amply paid for the book, whether I may see fit to keep a bee or not. It would seem by reading your most worthy book, as though you were one of the chosen to fulfill the bee mission, and I hope you may continue to be successful for all time to come, as in the past, and remain steadfast in well-doing, until you may accomplish the day when we may all be able to live on milk and honey, as of old. Go on, and help multiply and replenish the earth with those little winged friends, and you will be the better man for it. **WALTER S. PECK.**
Syracuse, N. Y., Nov. 20, 1882.

ONE'S OWN TOOLS.

Nothing in GLEANINGS has ever interested me more than your talk to boys and girls about the pleasures of farm life. There was a time in my life that I would not accept a farm as a gift, and be obliged to live on and work it; but now I prefer it to all other occupations. Your speaking of enjoying the work in the shop, and especially your *own tools*, reminds me very forcibly of when I commenced for myself. The very idea that the tools were mine gave me extra energy. The horses, cattle, and hogs, crops growing, and even the farm tools, looked so much better to me after possessing them, that it seemed to fairly open up a new world to me.

This is the first season since I commenced bee-keeping that the buckwheat has failed to secrete honey. Last season the drought injured it, but it was not a failure. My honey is all sold, and the bees paid big this year. I have 117 colonies packed in chaff hives. They are all strong, and have plenty of stores. **M. H. HUNT.**
Bell Branch, Mich., Nov. 20, 1882.

[And I am delighted to find it is my old friend, whose name is appended to the bottom of so pleasant a letter. Yes, I do know what it is to work with one's own tools. How is the juvenile "farm" and "farmers" at your house? Haven't had any letters from them yet, have we, friend H.?]

Conventions.

CONVENTION DIRECTORY.

TIME AND PLACE OF MEETING.

1883.
Jan. 2, 3, 4.—The New York B. K. Union, at Albany, in the State Agricultural rooms.
Jan. 9.—Cortland Union Bee-Keepers' Association, at Cortland, N. Y.
Jan. 9, 10. The Ohio State B. K. Association, at Columbus, O., in *Ohio State Journal* rooms.
Jan. 9, 10, 11.—The N. E. B. K. Association of New York, at Syracuse.
Jan. 11.—The Nebraska State B. K. Association, at Wahoo, Saunders Co.
Jan. 19, 20.—Mahoning Valley Bee-Keepers' Association at Berlin Center, Mahoning Co., O.
Jan. 20.—The S. E. B. K. Association of Michigan, at Ann Arbor, in Court-House.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

Headquarters in the South

FOR THE MANUFACTURE AND SALE OF

Bee-Keepers' Supplies.

The only steam factory erected in the South, exclusively for the manufacture of Hives, Frames, Sections, etc., etc.

The Van Deusen-Nellis, and Root's Simplicity hives, and the 4¼x4¼ all-in-one-piece sections a specialty.

Comb Foundation made on the Root's and Dunham's mill, of pure wax, and worked on shares.

Extractors, Smokers, Honey-Knives, Bee-Veils, and every thing needed in the apiary.

Italian Queens and Bees; no other races in my apiary or in the neighborhood. The superiority of the queens reared in my apiary is so well established, that no commendation is required. I send out no queen that I would not have for myself; and any one receiving a defective or worthless queen from me will have it replaced, etc.

Untested queens in April, $1.25; in May, $1.15; in June and after, $1.00; rates per dozen given on application.

Tested queens, from March 1st to July 1st, $2.50; and after, $2.00.

Selected tested queens, reared previous season, to breed from, $3.00. All my queens are reared from selected imported mothers of my own importation, and from selected daughters.

Early 4-frame nucleus, with tested queen, $5.00. I have made a specialty of the 4-frame nucleus for the last four or five years, and have sent them out to all parts of the U. S. and Canada, and so far without loss or complaints.

Every nucleus I send out contains at least 3 lbs. of bees when received and sent out in the full-size Langstroth frame. They are cheaper and more advantageous than bees by the pound. Any one wishing a list of those to whom I sent nuclei the last season can have it on application, so that they can inquire what they were, etc.

Full colonies in any quantity. Perfect satisfaction guaranteed in every instance. For more particulars, and prices, send for my descriptive illustrated catalogue.

Will pay 25 cents in cash, or 27 cents in trade for beeswax.

PAUL L. VIALLON,
BAYOU GOULA, IBERVILLE PARISH, LA.

QUEENS direct from the SOUTH.

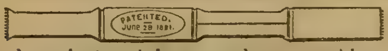
Dollar Queens, in April and May, - - $1.25
" " June and after, - - - 1.00

Tested Queens in April and May, - - $2.50
" " June and after, - - - 2.00

Queens sent by mail. Safe arrival guaranteed.

1inq **W. J. ELLISON, Stateburgh, Sumter Co., S. C.**

HIVES
—AND—
SECTIONS.



We have just put in several new machines and also a larger engine in our factory, consequently we are in better shape to fill orders than ever for Bee-Hives, Sections, Shipping-Crates, etc. We make a specialty of our

"BOSS" ONE-PIECE SECTIONS,

Patented June 28th, 1881. We can make the "Boss" One-Piece Sections any size or width desired. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Jeff. Co., Wis., Jan. 1, 1883.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

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WANTED!

Two assistants in the bee business. R. WILKIN, San Buenaventura, Ventura Co., Cal. 1d

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EARLY QUEENS!

We are preparing to send out, in March, untested Italian queens. Orders received now will be filled in the order received. We have 8 tested queens (wing cut), raised in nucleus late in the fall (and wintering in 4-frame nucleus), which will be sent when asked for (same price). We will advise all correspondents; and when they are ready, price can be forwarded to us. Price $1 00.

J. W. K. & A. G. SHAW,
Loreauville, Iberia Parish, La.

NORTHERN GROWN
SEEDS, PLANTS, VINES, BULBS, ETC.,

at growers' prices, grown at my seed farm, fruit garden, and apiary. Descriptive catalogue free.
Address JOHN H. MYERS,
1-2d Saratoga Springs, N. Y.

J. V. Caldwell, Cambridge, Henry Co., Illinois,

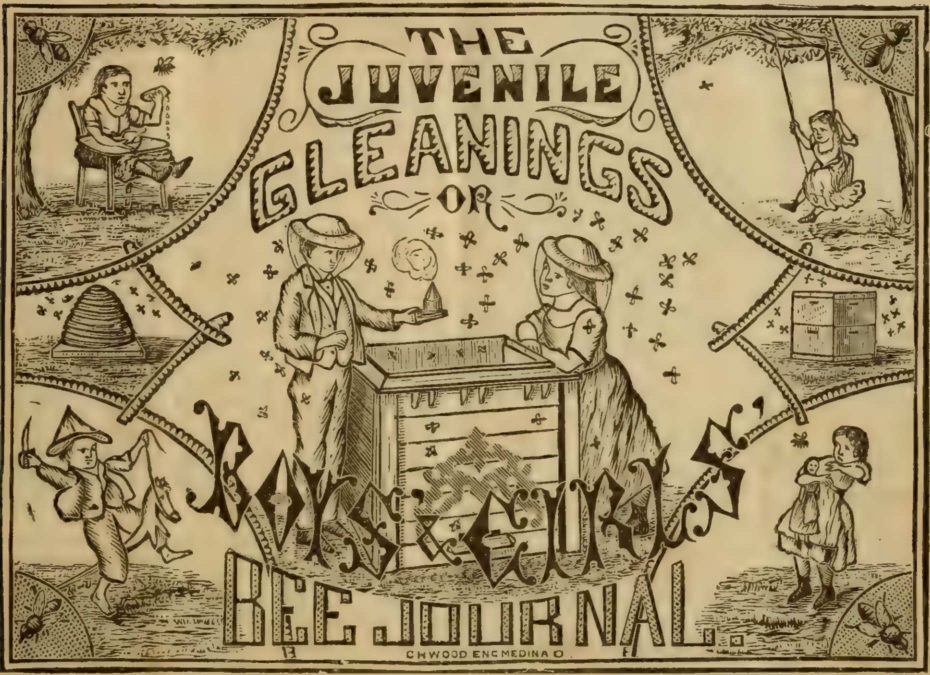
Manufacturer of Comb Foundation, and dealer in Supplies for the Apiary. New circular for 1883 now ready. Send for it. 1d

---

Sweet-Clover Seed.

New and clean, 25 cts. per lb.
1-4 BEN CLENDENON, Grinnell, Iowa.

GLEANINGS IN BEE CULTURE EXTRA.



He that is faithful in that which is least, is faithful also in much.—LUKE 10: 16.

PUBLISHED BY A. I. ROOT, MEDINA, OHIO.

Vol. 1. JAN., 1883. No. 10.

MYSELF AND MY NEIGHBORS.

Buy the truth, and sell it not; also wisdom, and instruction, and understanding.—PROV. 23:23.

HERE I am at my type-writer again, my young friends; and, come to think of it, I am real glad I have got a type-writer too. Do you wish to know what it is like? Well, a little way off it might look like a sewing-machine; but when you get close to it you will see that, in place of any thing on top of it to sew with, it has keys something like a little melodeon. Each one of the keys has a little glass button on the end of it, and under this glass button is a letter or a figure. There are 44 characters in all; and when I strike the glass button it prints that letter on a roll of paper, or, rather, on a long sheet of paper, rolled on a rubber roller. Now, the difficult part of a type-writer is the mechanism that makes it print the letters all in a row, so as to make lines, and at the same time keep the letters all right side up. I wonder if I can explain it. Suppose you balance a lead-pencil across the edge of a wash-basin, letting one end rest inside just about on the center of the bottom. Well, now, if you were to strike on the end that sticks over the outside, this end in the bottom would fly up. Now, if a roll of paper were right over it in the right place, and a type were on the end of the pencil, it might print a letter when it struck. Well, if you had 44 pencils, pivoted clear around the whole rim of the basin, striking their outer ends would print letters on the paper roll, and this is the way the type-writer works. Instead of striking letters I can strike periods and commas, and even spaces, so the words shall be separated.

At my right hand is a window that looks out toward the railroad, so I can see all the trains that come in, and all the goods that come and go away. At my left hand are the desks of the book-keepers I told you of last month. Behind my back is a sort of closet where the Waterbury watches are hung before the window. They make almost as much of a clatter as a lot of geese. I rather like them, though, for they sound so busy. I always enjoy going through a room where a great many are at work, making such a din and clatter that, if any one should stop to tell long stories, no one could hear him. The watches are all tested at the factory; but to be *sure*, we hang them all up and test them again here. After they have run correctly one day hanging up, we have one of the hands carry them a day. I have got two now that I am carrying. Addie comes to me every morning with a little willow basket full of "regulated" watches, as we call them, for they are the ones that have been up by the window until they have "behaved" well one day. She takes two out of the basket and gives them to me, while I give her the two I have been carrying. If the two I hand over are exactly right, they go into boxes to be sent off to the first one of you that calls for one. If they are not right, they go back to the window again; and if they won't behave then, they are put into a box and go back to the factory where they are made, with a paper tied around their necks like naughty children, telling what their faults are. As the factory are steadily improving on them, the number to be sent back is daily growing less and less. Of the new series, just out, we are having remarkably good luck, if that is what it should be called. Almost every morning I find the watch in either pocket exactly right. I like watches. When I first went into business for myself I started a watch-repair shop; and when I went to bed at night, the last thing I heard as I closed my eyes was the busy ticking of the clocks and watches near my bed. I succeeded with them, because I loved them; and it wasn't very long before I had more work than I could myself attend to, and so along came a troop of boys and girls to help. In the drawer before the window behind my back are some of the tools I used to work with then, and I enjoy it now to sit down there and make trifling repairs, when I can find time. A watchmaker must be nice in his work, and careful and exact. One who can handle the delicate parts of clocks and watches, and do good to them, and never harm, usually commands good wages, and I am glad he does.

Didn't I tell you who Addie is? Perhaps I didn't. Well, when I used to be a "watch-fixer" her mother was a particular friend of mine, and by and by she got married, and there were some nice little girls at her house, and Addie is one of those little girls who have got "growed up." Who told her about watches? Why, I guess I did. You see, she kind o' looks after them, just as you look after the chickens. She forgets them sometimes, but not very often; and then, you know she is one of my neighbors that I was going to tell you about; and as we always ought to be good friends with our neighbors, Addie is a pretty good friend of mine, even if I do have to talk to her sometimes very much as your mother talks to you.

Well, not only does Addie take care of the watches, but she also has it a part of her business to take your letters down to the counter store and get the scissors, pins, needles, clothes-lines, etc., that you order. Let us go with her on one of her shopping expeditions. She takes a basket, with a lot of letters in the bottom. "Lu," of whom I will tell you more after a while, has first gone over these letters, and picked out what were to go by mail, making the writing and the prices plain, before Addie takes them. Down there we find Eliza presiding. While Addie is picking the things she wants from the counters, Eliza puts more goods in their places. Her business is to see that every article is always in its place, or a card where it should be, having on it, "Sold Out;" then when I come along I can see at a glance just what goods we are needing. More than this, Eliza keeps a book, with the names of goods nearly out. Here is what I find on the book now:—

"Five-cent flour-scoops, one left. Paper lamp-shades, two left. Mouse-traps, five-cent, two left," and so on.

Do you want to know who Eliza is? Well, I think we must have been "neighbors" for over 25 years. After Sue and I had more "prattlers" in our household than "mother" could well care for, Eliza came to live with us. The children now think about as much of her as of their own parents, and always did ever since I can remember. A few years ago Eliza got so tired of doing housework that, much as she loved the children, she had resolved to go off to the city and do some other kind of work. It happened just about the time I had got the "counter-store" fever, and finally I suggested that she should "keep store" for me, and not go away from the children entirely. I then learned, for the first time, that it had always been her wish to keep store, above any thing else. Eliza had been a Christian, years before I was. I presume she well remembers the time when everybody was astonished to see me suddenly become a praying man. Well, as I made all my projects a subject of prayer, I had been asking God's blessing on the store I wished to start, without dreaming that it had any thing to do with her future. She was also praying for God's blessing as she went away from her old home. When "neighbors" are both going to the same God in prayer, do you not see how easy it is for him to show them how they may help each other? She has helped me, and I trust I have been able to help her.

Would you like to keep store? Well, if you wish to succeed, you want to be a Christian. If you have the desire in your heart to please God, this will make you fair and honest to your customers, as well as to your employer, if you have one.

Our counter store is now so filled up with goods that it becomes one of the fine arts to see how many goods can be put in a little space. Packages are piled clear up to the ceiling, and every shelf is made to hold just all it possibly can. The windows are filled, and goods are piled so closely to the stove they are in danger of being scorched. Goods that won't scorch are almost right against the stove; and when John was here during the holidays he made some wire-cloth baskets for lamp-chimneys, right close up to the stove-pipe. You see, lamp-chimneys are sold very often, and quite a stock must be kept on hand; and as they occupy a good deal of space it becomes quite necessary that they shall be always handy. We keep the bulk of them in the warehouse, in large casks. Well, now, when we make only about a cent apiece on them it will by no means pay to send a man to the warehouse every time half a dozen lamp-chimneys are wanted. Do you say a boy should do such jobs? But, my friends, we don't have boys in the factory at this time of the year. It is true, many of them would like to work, but it would keep them out of school, and I never want to hear anybody say I have kept boys out of school by giving them work here.

Besides the goods stored in the counter store, we have a large room full in the cellar, and a warehouse large enough to run a train of cars through, that is pretty well filled with goods, and bee-hives in the flat, ready to ship. If we don't look out, and keep things in order, we let goods get lost, and then go and order more when we have a lot already. I tell you, one has to look sharp, to sell things for five cents apiece, and hire folks to do it, and not have the expenses amount to more than the profit. Don't you see how glad I am to get real steady honest faithful hands that won't stop to talk and play, nor let things get scattered around and lost?

There is another little neighbor I think I shall have to tell you about, that I often meet in the counter store. It is Caddie, who isn't old enough to go to school. She is always happy whenever she can go down to the store, to see Eliza. She usually greets me with "Hello, pa," and then I have to look pleasant, and say, "Hello," back again. When a number are asking me things all at once, I can't always smoothe my face down to say hello, just on the minute; and then she gets hold of my hand, and says, "Why don't you answer, pa? it's me. I said hello to you." You see, I have to laugh then, and stop business long enough to return her greeting. Isn't it too bad, that I have to stop and laugh when I don't want to? Come to think of it, I believe it rather helps me with my work, in the end. What do you think? Do you ever help your papa that way?

While I think of it, I want to show you some pretty cups and saucers, of which we have just got a great cask full. They are printed, or decorated, and there are all sorts of different colors. They are 10 cts. for a cup and saucer, but we put a set, of 6 each, in a pretty little willow basket, and sell the whole for half a dollar. Blue Eyes and her cousin Millie sorted a lot of them out a few days before Christmas. It won't hardly pay to have them sent by mail, for the postage is 10 cents on a single cup and saucer; but when your father is getting getting goods of us, you might order some sent with them.

DECORATED CUP AND SAUCER.

Do you want to know what Caddie does in the counter store? Well, she usually borrows a chair, and then gets one of the five-cent kitchen-sets and an orange, and has "supper." Then she gets a lot of dressed dolls, and sets them around in a tin pan, and has "school." Didn't I tell you we kept dolls for sale in the counter store? Well, we do. Eliza thought we wanted them, some time ago, but I argued they weren't "useful articles," and we don't sell any thing but that is useful; but Eliza didn't agree with me. Do you think dolls are useful articles? Caddie evidently does, for she "uses" them a great deal. I have sometimes worried a little for fear she would get them soiled before they were sold (and you know folks want dolls just like the new tin pans I was telling about last month); but Eliza says Caddie is always very careful of them. May be I have been a little selfish in getting things for the counter store for the boys only, without thinking that girls want dolls just as much as boys want sleds and wagons. Did you never know I was selfish? Well, I am. I will tell you of one place where I discovered I had been selfish.

Let's go back up stairs. I always go up three steps at a time. Can you keep up with me? You see, I have to write so much I get tired; and when I want exercise I run all over the rooms, to see if anybody is doing any thing wrong, or making any mistakes, and then run up stairs, just for fun. I don't make much racket, for I wear kid shoes so I can get around like a cat, you know; and then when I go outdoors I put on rubbers, so my feet are never muddy. We are wanting a carpet in our office, but we can't afford it just yet; and besides, we have a stove that makes so much litter it wouldn't work well. And, by the way, this stove is a "neighbor" that stands right before me, and pretty close too. Well, one day while I was writing I got too warm, and, as usual, opened the stove-door. As I did it, it occurred to me for the first time that perhaps the rest, whose desks were further away, might not be too warm. I thought a minute, and then spoke:—

"Girls! Have I been keeping the room too cold for you, in my selfishness, because I happen to sit close to the stove?"

I knew by the smiles that were passed around I had "struck the nail on the head;" and they finally confessed, laughingly, that they talked of asking me to write a "piece" on "cruelty to clerks," shortly after I wrote that one about cruelty to horses. It was because I was careless and thoughtless. When it was summer time I moved my type-writer quite near to the stove; and then, as it gave more room to pass into the closet where the watches are, I left it there when we began to have fires. After thinking a minute I told them I was sorry some of them did not talk right out plain to me and say,—

"Mr. Root, you are a big strong man, and warmly clothed, and sit close to the stove, while we are obliged to sit in different parts of the room, and yet you keep the stove at just such a temperature as to suit yourself, without a thought or care for our comfort."

I know you will plead for me, by saying I did not think, and that I did not mean to be unmindful of the comfort of others. I am inclined to think that a great part of the selfishness in this world is caused by people not thinking. My young friend, are you keeping anybody away from the stove this cold wintry weather? Are you standing in anybody's light? Are you making somebody suffer, by forgetting something you ought to remember? If so, you are not following the Master, for *he* "pleased not himself."

A GREAT NAME.

HOW SHALL WE BECOME GREAT?

IN our last number were some lines of poetry about Alexander the Great. In a few days after printing them we received a letter from a reader in Pennsylvania, asking if we could not give the whole poem, for she used to know it, and had been looking for it a long time. Thinking many more would like to read it, we give it entire from McGuffey's Third Reader: —

Son. How big was Alexander, pa,
That people call him great?
Was he, like old Goliah, tall?
His spear a hundred weight?
Was he so large that he could stand
Like some tall steeple high;
And while his feet were on the ground,
His hands could touch the sky?

Fath. Oh! no, my child: about as large
As I or Uncle James.
'Twas not his *stature* made him great,
But greatness of his name.

Son. His *name* so great? I know 'tis long,
But easy quite to spell;
And more than half a year ago
I knew it very well.

Fath. I mean, my child, his *actions* were
So great, he got a name
That everybody speaks with praise
That tells about his fame.

Son. Well, what great actions did he do?
I want to know it all.

Fath. Why, he it was that conquered Tyre,
And leveled down her wall,
And thousands of her people slew;
And then to Persia went,
And fire and sword on every side
Through many a region sent.
A hundred conquered cities shone
With midnight burnings red;
And strewed o'er many a battle-ground,
A thousand soldiers bled.

Son. Did *killing people* make him great?
Then why was Abdel Young,
Who killed his neighbor training-day,
Put into jail and hung?
I never heard them call *him* great.

Fath. Why, no, 'twas not in war;
And him that kills a single man,
His neighbors all abhor.

Son. Well, then, if I should kill a man,
I'd kill a hundred more;
I should be great, and not get hung,
Like Abdel Young, before.

Fath. Not so, my child, 'twill never do:
The gospel bids be kind.

Son. Then they that *kill*, and they that *praise*,
The gospel do not mind.

Fath. You know, my child, the Bible says
That you must always do
To other people, as you wish
To have them do to you.

Son. But, pa, did Alexander wish
That some strong man would come
And burn his house, and kill him too,
And do as he had done?
And everbody calls him *great*,
For killing people so!
Well, now, what *right* he had to kill,
I should be glad to know.
If one should burn the buildings here,
And kill the folks within,
Would anybody call him great,
For such a wicked thing?

For Juvenile Gleanings.

A DISH OF VIRGIL.

AH! what's this?

Why, some of Virgil's poetry, to be sure.

Virgil? who is he?

He was a poet, and you see people have a way of valuing poets, and deciding who was the greatest one that ever lived in the world, and who was the next greatest, and so on. The general decision is, that Homer was the greatest one, and Virgil the next greatest.

But, why should you be meddling in the matter, Mr. Hasty? Let Mr. Virgil himself write, and send some poetry for us.

That would hardly work. Virgil lived 1900 years ago, and has been dead so long, that we couldn't expect him to write a letter to the JUVENILE GLEANINGS.

But, isn't his big poetry a little too tremendous for young people? And what business has it in a bee paper, any way?

You see, Virgil wrote a regular poetical A B C of bee culture, and that's the business he has in a bee paper; and as to his poetry being tremendous, I think, dear children, you all need to learn the difference between empty rhyme and jingle, and real, grand poetry. Real poetry has a certain gracefulness of air and exaltation of thought, both of which are frequently lacking in what passes for poetry. If you would just *study* this poem of Virgil's it would do you lots of good, may be. Scholars study months, and even years, to be able to read Virgil's poetry in the original Latin. Moreover, some of the big folks, it may be, will enjoy looking over our shoulders in this study.

Let us chat a little about the writer of this bee poem. We think it was a great while ago that Jesus was in the world doing miracles; and it was a few years longer ago that Virgil lived. He lived in a heathen country, in Rome, in a cruel, wicked age; and yet he seems to have been a gentle, modest, amiable, good man. And the people were so proud of their grand poet, that, when he came into an assembly, everybody rose up, just as they did when the emperor came in. The Romans were so much given to fighting and bloodshed that pretty much every thing useful was thought unworthy of a great man's attention; and so Virgil wrote for them four long poems about farming, fruit-growing, stock-raising, and bees, to turn their hearts to something better than killing people. Was it not kind of him to use his fame to do good? In Virgil's days many were wondering and talking about the Christ that was expected to come into the world, and so Virgil wrote a splendid poem about the reign of Christ on earth. In this poem there is a very touching prayer for himself, that he might live to see and write about the wonderful things that should be done. Virgil wanted very much to see the world's Christ. I have felt very sad for him many times that his prayer was not granted. He would not have been so very old if he had lived till Jesus was born at Bethlehem. Perhaps Jesus did just a little think of him when he said that many righteous men had desired to see and had not seen.

I think the common impression is, that Virgil didn't know much about bees, and that he drew on imagination and popular whims for his facts. I should like to do something to correct this idea. Virgil misapprehended his facts sometimes, as do all early investigators in any science; but for all that he is a scientist and not a romancer. I feel astonished to see how well informed and accurate he was. My feeling is, that no great poem in the world has suffered so much from the ignorance of those who have had the handling of it. It has been translated into English, but never, I think, by a modern beekeeper, who would naturally take to its suggestions as a duck takes to water. So, if Mr. Root approves, I will render it for the JUVENILE.

You must understand, children, that the translation of a foreign poem into English rhyme can not be an exactly literal translation. Some liberties have to be taken with the original words in order to complete the lines and rhyme them. Much, therefore, depends upon the translator; and one man's translation may sound considerably different from another's translation of the same thing.

Virgil had an excellent friend whose name is pronounced *Me-see-nas*, and to him he dedicated his treatise upon bees. And the figures in marks like this (4) refer to notes that I will put at the end of the poetry.

GEORGIC FOURTH.

INVOCATION.

The heavenly gift, the honey of the air, (1)
Mæcenas, I will now expound with care.
This portion also deign to ponder o'er,
As well as greater things I sang before.
The wonderful in little things I'll tell
Until your admiration it compel.
Of a whole race in order I'll relate,
Their leaders grand, the customs of their state,
Their teeming multitudes, their busy zeal,
Their glorious battles for the common weal.
Full well I know that one might call my care
A great ado about a small affair;
But small the glory surely will not be
If evil fates but yield the way for me,
And the great spirit of immortal song,
Called to my aid, shall hear and make me strong.

CHOOSING A LOCATION.

First a location and a proper spot
There must be sought for bees; and choose it not
Exposed to wind; (2) winds unrestrained and rude
Forbid the bees to carry home their food.
Choose not the place for apiarian bowers
Where sheep and butting goats insult the flowers;
Or wandering steers shake off the dew amain, (3)
And waste the growing herbs upon the plain.
From the fat hives these should be absent all,
Lizards, among repulsive things that crawl,
Painted as to their scaly backs with spots,
Let them be absent from the chosen plots;
The bee-eater, and other flying bands,
And swallows marked on breast with bloody hands;
All these plunder at large in fields of air,
And flying bees in cruel beak they bear
A dulcet morsel to their merc'less young,
No more to bask the fragrant flowers among.

But liquid founts, and ponds with mosses green,
Let these be present, and in silver sheen
The slender brook, swift hurrying thro' the grass,
Reviving nature as its waters pass. (6)
A palm should shade the entrance of the hive,
Or some great oleaster there should thrive, (7)
That when the kings (8) lead forth the first new swarms,
In their own spring which all the earth transforms,
The royal youth just issued from the combs
May play, delighted, round their pleasant homes,
Where neighboring banks with summer glow invite
Betimes the festive monarchs to alight,
And a convenient tree across their way
With hospitable boughs may bid them stay.

There ! isn't it excellent so far? Have the apiary so Eden-like with shade and waters and sunny banks that swarms can't afford to run away from it. Especially good is the counsel to have convenient trees right in the lines where swarms would naturally drift away.

(1) The condition of the air has more to do with the honey-crop than all other causes combined. Most of the famous honey regions of the world, California, Chili, the land of Canaan, Dalmatia, etc., are where the air, sweeping in the prevailing wind for a long distance over the water, is suddenly lifted up and rarified by a range of hills. No doubt, however, the idea prevailed then, as it does now, that honey sometimes fell in minute drops from the atmosphere. We certainly have floral honey and leaf honey and insect honey; and whether there is or is not a fourth kind that settles from the air, is in doubt to this day. Some pretty strong evidence seems to indicate that there is such a thing.

(2) Very level-headed advice this is. Localities vary greatly; and it is worth while to search for a good one if you wish to keep many bees. To perch an apiary on the bald, windy top of a hill is very foolish. The poet also thinks of some more warnings about bad locations, and inserts them further along in the poem.

(3) California bee-keepers sometimes fairly cry out with vexation, their business is so interfered with by great flocks of sheep.

(4) Toads are bad enough, but lizards have the same greedy appetite for insects, and can stick their heads right in at the entrance. Aren't we glad they are not plentiful in this country?

(5) The kind of swallow mentioned here, the one with just a few red feathers on the breast, is, if I am right, never seen in this country. Considering the "cut of his jib," we don't want him, even if he is pretty.

(6) Great ponds and rivers are sometimes injurious; but little ones are beneficial.

(7) Virgil is here clear up to the high-water mark of modern practice. A palm is like a big umbrella on a pole. If the shade fell on the hive in the heat of the day it would not shade it night and morning. The oleaster, being similar to the olive, would throw a rather light, thin shade. The teaching seems to be, shade the hives, but not too much, and have sunshine morning and evening if you can.

(8) I suppose we might bout as well admit here, that our poet seems not have found out that the object of affection and loyalty in a hive is a female. Surely, we can forgive him that much if we try hard.

Richards, O., Jan. 2, 1883. E. E. HASTY.

I am very glad indeed that friend Hasty has taken up the cause of our good old friend Virgil, and I confess the point he makes is one I never really thought of before. I wonder if some of these children speak German as well as English, as our boy Jacob does. If so, they know how hard it is to interpret for any one something they do not quite understand themselves. Some years ago, before Jacob came here, we had letters from our friends in Germany, and some of the students in college wanted to translate them for us, just for the practice it afforded. Now, these students were educated, and smart, but they didn't know "bees" at all, as you and I do. Well, in one of their translations we found the word "bee-cradles." What do you suppose it was that they called a bee-cradle ? They were a good deal troubled about it, and wrote, asking us if we knew any such thing. They said it seemed to be something the bees had to keep a young bee in, and they could not think of any thing better than a cradle! How should they know, any way ? I don't know whether they thought the bees rocked their babies to sleep, or not; but it was the nearest way they knew of to tell it. What was it they meant ? Why, a *queen-cell*, of course. Well, now, those who translated Virgil had not only this trouble, but they had to get some word that would rhyme besides. Why, the reporters of our daily papers can't even write a report in English, so it sounds right to a bee-man. Just think of "horse-meat honey" and the like. Ernest is now studying Virgil in college, and he and I had quite a laugh over "bee-cradles" only a few days ago. Give us the rest of it, friend Hasty, and put in plenty of your notes, to make it plain to "us children."

MRS. HARRISON TO THE CHILDREN.

BEE-STINGS AND — PREMIUMS.

CHILDREN, I have just finished reading your letters in the last JUVENILE, and you are improving. Keep on taking pains, for that is the way to succeed.

If I were Mr. Root I should want all the boys and girls who write, to be bee-keepers — own at least one colony, and take care of it. Most of you could hive a colony, could you not? and not get stung either, if you are careful.

There is one thing that you can do better than older persons in the apiary, and that is the watching. You see and hear quickly, and sing out, "The bees are swarming!" before any one else knows it. If you worked with bees more you would not be so afraid of them. That, at least, is the experience I have had with children. With but one exception, after they had been stung several times they cared very little about them. How many of you can catch a bee on the window, and put it out without being stung? How many of you will be bee-missionaries, and teach people to take better care of their bees? In order to do this, see how large a club of subscribers you can get for GLEANINGS for 1883, and get some of those nice premiums. A magnifying-glass would be a daisy, wouldn't it? If you had one, you could examine a bee's leg or wing, or see whether a drone has whiskers. A silver thimble would delight a girl; but how tall a boy would feel to gain the Waterbury! MRS. L. HARRISON.

Peoria, Ill., Jan. 1, 1883.

DO THEY CHOOSE A LOCATION BEFORE SWARMING?

BY ONE WHO ONCE WAS A BOY.

YOUR article on bee-hunting recalls an incident of my boyhood days, when I lived in this State in the early settling of this section. An elder brother (a man grown, and a great bee-hunter) and myself were drawing a load of hay, and had to pass more than half a mile through the woods. He was driving the team, and I was lying on my back on the hay. As we passed under an oak-tree I could see a stream of bees pouring in and out of a knot-hole in the tree. I called to him, and we stopped and looked at them, and then went home with our hay; and after dark we came back prepared to cut the tree and carry home a fine lot of honey. But, lo! no comb, no honey, and but a single bee (evidently belated, he had concluded to stay over night) left of all the busy show of business but a few hours previous. If they had not cleaned out that tree for future occupancy, they were guilty of the grossest deception I ever knew to be practiced by the insect world. D. BINNS.

Addison, Mich., Dec. 30, 1882.

Very good, friend B. Shall we not send you a book?

JUVENILE·DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued fram Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye, takin' notes,
An' faith, I'll prent it."

DID you ever see a promissory note, children? A promissory note is given when one wants to pay the money for a thing, and doesn't have it, but has good reason to think he will have it after a while. For instance, suppose your father wants to do his plowing, and has only one horse. Well, he might wait until he got the money to buy the horse, were it not that the plowing must be done at the proper time, or it would be too late to sow the crop. Well, if he is a man of good reputation, almost any one would sell him the horse, and take his note for pay. The note would probably read something like this: —

$150.00 *Medina, O., Jan. 9, 1883.*

For value received, I promise to pay Thomas Jones, or bearer, one hundred and fifty dollars, ninety days after date. A. I. Root.

You see, I am just supposing it was myself that was going to buy the horse, and, to tell the truth, I do need one; for although old Jack plows very well when he has another horse to help pull, he some way always seems disgusted when we try to plow with him on the one-horse plow.

Well, now I want you to notice the three first words of the above note. They are, "For value received." What do you suppose that means? What is the value received? Why, in the above case it is the horse, of course, and it ought to be a pretty good horse to be "value received" for $150 too. Well, I was a little surprised to be told by my good friend Mr. Pond (he is a lawyer, you know), that a "promise to pay" would never stand law, unless it could be proven there was a "value received" along with it. True, we expect a Christian man to keep his promises; but the law recognizes that no man, in his right mind, would ever make a *promise to pay*, unless he had *value received*, in some shape or other. You see, they always go together, and one balances the other. I presume they balance about like the sandstone that the old gentleman used to go to mill with. He could not make the corn stay on the old horse's back, unless he put a big stone in the other end of the bag, to balance.

I wonder now if it won't be a good thing for us, my little friends, to try to have all our little business transactions balance. Do not let any thing be all on one side. Whenever you hold anybody's promise to pay, be sure they have value received. Now, see if we can't get down to business. I have promised you a book, if you would write me a letter; but I stated, too, that the letter was to tell something that everybody didn't know, or that would be worth something when I put it in print. Of course, I don't expect letters from children to be worth very much, and I don't "promise to pay" very much; but, my little friends, don't you think there ought to be just a little "value received"?

I very much dislike to find fault with these little letters, but I think it is chiefly for your own good that I should insist on something that will make you work just a little. As an illustration, here is a letter right before me that reads thus:—

I received the book you sent me, and was very much pleased with it. I should like to see my letter in print. Please send me Sheer Off.

JESSIE ALVERSON.

Gosport, Owen Co., Ind., Dec. 29, 1882.

Now do you see, little friends, that this is in reality only a report of the book she had, a request to see her letter in print, and a call for another book? It doesn't tell a single thing about bees, nor, in fact, about any thing else of value to the rest. Don't you think, my little friend Jessie, that it will be best to have you try again, and see if you can't send us something about bees, before we send you Sheer Off? Another thing: There are more letters than there is room for now, and so I shall have to pick out the most valuable ones to print. Don't you think that will be the best way? That is the way it is when we grow up; and this paying the best price for the best work is what makes us grow up to be strong, useful men and women. Now, you won't call this a scolding letter, for starting the new year, will you? It isn't because we are unwilling to furnish a *five-cent book*, but because we fear it would not be so well for *you* to send you books without requiring you to give some sort of "value received."

I go to school, and have a fine time. My father has 24 hives of bees. We took lots of honey this fall. Please send me a book. MINNIE WILLIS.

Yocumtown, Pa., Nov. 13, 1882.

My brother-in-law keeps bees, and sometimes I go down there and they do not sting me. I should like to have one of your books that would suit a boy ten years old. WILLIE E. DUMONT.

North Branch Depot, N. J., Nov. 6, 1882.

BEES IN A HOUSE.

My brother has 11 swarms of bees. Last summer they made lots of honey. His bees are in a house which he built. My father is a wagon-maker.

GEORGE MILLER, age 12.

West Toledo, Ohio, Jan. 1, 1883.

I am a little boy seven years old. My mamma has two stands of bees. They have not swarmed this year. I should very much like a new book. I go to school. LEON SPENCER.

Orange City, Fla., Nov. 10, 1882.

My pa has four stands of bees. I wash dishes for my ma, and do lots of chores for her.

ANNA TURNER.

Breeds, Fulton Co., Ill., Jan. 2, 1883.

That is the kind of girls I like, Anna; those who help their mothers.

I thought I would write you a letter. We have one hive of bees; we did have two, but another swarm came and robbed it. We received 65 lbs. of honey from the remaining hive, and we expect to have about four swarms in the spring.

LILY HOUSTON.

Wamego, Kansas, Dec. 27, 1882.

My pa has kept bees for over 16 years. I go to Sunday-school and day school. We are going to get our prizes next Sunday. I have got a book, and its name is Sheer Off, and as far as I have read in it I think it is a very nice book. I should like you to send me another. ROBERT T. MCNICHOL.

Weston, Ont., Can., Nov. 11, 1882.

My pa has 26 colonies, and 5 chaff hives. One hive has 3 swarms in it. I helped pa pack his bees in boxes for winter. Please give my card to Caddie.

Elyria, O., Dec. 22, 1882. KATIE M. JOY.

I am always very glad to hear from my little friends, Katie, and Caddie sends you many thanks.

"GRANDPA'S JUVENILE."

I have been reading the children's letters in grandpa's JUVENILE. My grandpa keeps bees. They made more honey last season than for many years before. They are black bees. I never saw any Italians. Grandpa says he is going to get a colony of them. WM. E. ALVIS, age 10.

Montrose, Lee Co., Ia., Dec. 20, 1882.

My pa has 47 colonies of bees, and in spring we had only 25. We got only about 200 lbs. of honey this summer, as it was not a good honey year. We gave my brother one of the best ones this summer, and he did not get any honey. He wanted to feed them some sugar, but they would not eat it.

LIZZIE FRICK, age 13.

Mogadore, Ohio, Nov. 24, 1882.

Why, Lizzie, your bees must be funny if they won't eat sugar. I think I could make them "eat."

100 LBS. COMB HONEY TO THE COLONY, ETC.

My pa is a bee-keeper. He has 31 stands, all Italians. One hive made 100 lbs. of comb honey, besides 50 lbs. to winter on. Some made only enough to winter on. I have two little sisters and one brother, named Emma, Ruth, and Walter. Old Santa Claus brought me a donkey and rider. I should like a book. Pa lost his price list. Please send him one. He wants to start a saw mill, and wants a saw.

EUGENE R. HIXON, age 7.

Sir John's Run, W. Va., Dec. 27, 1882.

Well, now there is an idea friend Eugene. When your father wants a new price list he doesn't have to write a letter, but only to tell his seven-year old clerk to do it. And you sent in his report too, didn't you?

FROM 16 TO 25, AND 2000 LBS. OF HONEY.

My pa is a bee-keeper. He had 16 stands in the spring; sold 3 stands, and has 22 now, and they are all Italians. He has extracted 1250 lbs. of honey, and taken off about 750 lbs. in sections, and nearly all of it is sold. G. W. MILLER.

Chariton, Iowa, Dec. 25, 1882.

Mamma has one swarm of bees, but they did not make any surplus honey this year. My aunt keeps bees. One year she had almost all of her honey stolen. Papa has about 40 cows, and I have two dogs; one is a shepherd, and the other is a little spaniel. I am 8 years old. CHARLIE BAINES.

Norwich, N. Y., Dec. 30, 1882.

Is it really so, Charlie, that there is anybody so bad as to steal honey from a woman?

THAT CHAFF HIVE, ETC.

Pa has just made a chaff hive. I tell you it looks nice. Pa takes great pride in his bees. I suppose that I have got to watch the bees all next summer. I watch them kill the drones, going down on their backs, killing them every minute. It is a great mystery to me how they know. To keep bees is a great thing to learn. GEORGE B. STAPLES.

Taunton, Mass., Dec. 29, 1882.

WHAT WALTER'S PA DID.

My pa keeps bees, and he took a queen-cell, and put it into a nucleus. He looked in it one day, and it had hatched, but he could not find her, and about 7 days after that he looked in the hive and found her; and as he did not want two queens in one hive, he took her and put her into another little box, and set it by a hive, and the bees killed her. Please send me Sheer Off, if I deserve it.

WALTER LIVINGSTON.

McVey, Macoupin Co., Ill., Dec., 1882.

I think you deserve it, Walter.

ROBBED "TO DEATH."

My pa keeps bees. He has 30 hives of them. He gave me one hive. I thought it had not enough honey, and I fed it, and other bees found it out and robbed it to death. Pa works at building houses, and he makes all his hives. We get lots of honey; he sold it for 25 cts. JOHN SPANGLER, age 13.

Shady Grove, Pa., Dec. 30, 1882.

When you attempt to feed *honey*, John, you must be awful careful, I — tell — you —, for it just sets those sneaking, pilfering bees crazy when they get a "sniff" of it.

MATTIE'S FATHER'S NOVEL WAY OF HATCHING QUEEN-CELLS.

Father has been keeping bees for over 25 years, and has had good luck, except in 1880. We had 48 stands of bees, and they all froze but 3. The next year they increased to 7 stands, and in 1882 we had 19 stands, after 3 had run off. I want to know what you think of our way of hatching queens. Father takes the queen-cells when they are about 8 or 9 days old, and puts them in little tin boxes, and puts them under my old hen, and they hatch all right.

MATTIE COBLENTZ, age 13.

New Paris, O., Dec. 20, 1882.

Thanks, Mattie; but we have heard of the same thing before, only it was friend Atchley, of Dallas, Texas, who did it, and he used clam-shells instead of tin boxes. I shouldn't wonder if a sitting hen would answer very well in place of a lamp nursery.

DO YOU CARE IF A LITTLE SIX-YEAR-OLD GIRL WRITES A LETTER? I LI⋈E TO WATCH PAᗨA WOR⋈ WITH BEES, AZD I LI⋈E HOZE⋈. I SEE SOMШ OF M≻ LETTШRS H▷<E ZE▷RLY T⊏MᗺLEᗜ O<ШR. JOSIE M. CONDON.

CLINTON, MO., DEC. 20, 1882.

I should think they had "nearly" tumbled over, Josie, when some of them are almost down flat. To be sure, I care to have 6-year-old girls write. I should like to know who has a better right to write, even if their letters are some of them "tumbled over." I told the printers to tip the letters just as you did, Josie; but I guess they have got them a little worse. Don't you think so?

THE BOY THAT HASN'T ANY BEES.

I have no brothers nor sisters to play with me at home. I don't own any of the bees either, but I own a pet sheep named Chester. He can out-butt all creation. I had lots of fun when he was little, holding up my foot and letting him butt it. Pa says all the fun is on the sheep's side now, as one of his backings and charges is more dangerous than a charge of pa's crossest hybrid bees. I forgot to say, that pa has Italians, hybrids, and black bees.

WIRT EDWARDS.

Sebre, Webster Co., Ky., Dec. 23, 1882.

THE SUPERINTENDENT IN A BAD FIX.

Pa has 17 stands this winter. He makes his own hives. He sold $10.00 worth last fall. We had lots of fun last summer when they swarmed. Pa pounded the bottom nearly out of mamma's dish-pan, trying to settle them; but they got away one Sunday. The bees stung papa when they swarmed, and his eye swelled so that he could not go to Sunday-school. He was superintendent. We all laughed at him. I have one brother and one sister. They are at school to-day. I am lame, and can't go to school when the roads are too bad to take a horse. Our schoolhouse is a mile and a half away. DORA BUNKER, age 8.

El Dara, Pike Co., Ill., Dec. 29, 1882.

TRIALS OF A MINISTERIAL BEE-KEEPER, REPORTED BY HIS LITTLE GIRL.

Papa takes GLEANINGS, and I like to read it. He takes a great deal of interest in bees. He took about 1000 lbs. of honey this year. My brother Willie often helps him. They both get a good many stings. Papa often gets stung on Saturday, so when he preaches on Sunday his eyes look very queer. Everybody in the congregation knows that he keeps bees, so they laugh at him a great deal, especially the young folks. I hope you will think this effort deserves a book; if you do, please send me Ten Nights in a Bar-Room.

CLARENCE B. ALEXANDER, age 12.

Dry Run, Pa., Dec. 19, 1882.

MARK'S PAPA'S 200 STANDS OF BEES.

My papa has about 200 stands of bees. He gave me a stand, and they are doing very well. He gave my brother a stand. Papa got 2 more stands about a week ago. My brother got stung, and I have not seen him around the bees any since. My grandpa gave me and my brother nine rabbits, but two of them died. This is my first letter. I am going to school. MARK BARBER.

Langford, Col., Nov. 26, 1882.

I guess your brother must have been

"busy" somewhere else, after he got stung; don't you think so, Mark?

A JUVENILE LETTER FROM MERRY ENGLAND.

My father keeps bees, and I help him to swarm them. He has 8 stocks now; 2 have died. We have GLEANINGS every month from Mr. Abbott. I like the JUVENILE very much, and I like honey; but we have not had any this year, as the bees did nothing but swarm. Father says he will give me a swarm next year. This is my first letter. I am just 9 years old. Can you send me a book?

GEORGE A. SISSLING.

Birkin Avenue, Nottingham, Eng., Dec. 21, 1882.

It would be funny if we couldn't, friend George, when you have written us a letter from so far.

LEFT-HANDED LAURA.

Pa had five stands of bees last spring, and has increased to 14. Ma and my sister Ellen hived lots of swarms. I go to school. I was left-handed, and my teacher is having me write with my right hand, and I can't do it as well as I could. Pa got 200 lbs. of extracted honey, and has sold $60.00 worth of comb honey. I filled the upper story of the hives with straw and leaves.

LAURA WRIGHT, age 10.

Linn, Dallas Co., Ia., Dec. 26, 1882.

I think your teacher is a very reasonable one, Laura, and I am sure you will soon write as well right-handed as you ever did left. I am glad to know you like to help your father about the bees.

A LETTER FROM MY "COUNTRY NIECES."

Well, as you are getting letters from almost every one, I thought may be you would like one from one of your country nieces. My aunt Drusie has five swarms of bees. One day mamma and aunty were out working with the bees, when my little kitten went out and a bee stung it. You ought to have seen it run. It was pitiful, but I believe you would have laughed. Tell Blue Eyes that I have another kitten that is blue all over. Mr. Root, you need not print this if you don't want to, but I hope you will.

EDNA GREAVES.

Moawequa, Ill., Dec. 28, 1882.

I would not laugh, if I were you, niece Edna, at any thing that gives any creature pain; but I presume you didn't mean to, did you?

HOW NELLIE'S FATHER GOT THE MOTH WORMS OUT.

My father had about 60 swarms of bees last spring; he now has about 75. He got about 1500 lbs. of honey. After he took off his honey, the millers bothered it so that he made a large box to put it in. It is about 16 feet long, and wide enough to hold two Langstroth frames, with a center-piece in the middle. Then there are holes cut in the side of the box and on the cover, which are covered with screens; and when he wants to smoke the honey he has a slide to put over the holes, and then puts some fire and sulphur in a kettle, and puts it into the box, and that does its work effectually, and father thinks it is a grand thing to keep frames of old comb in.

NELLIE M. HUDSON.

Belden, Lorain Co., O., Dec. 23, 1882.

Nellie, our printers extend you a vote of thanks for the remarkably accurate manner in which your letter is written. Your writing is good, punctuation very fair, and spelling faultless.

FROM 4 TO 14, AND 600 LBS. OF HONEY, REPORTED BY A JUVENILE.

Pa had four swarms of bees in the spring, which increased by natural swarming to 14. Pa thinks he took off about 600 lbs. of honey, and they have plenty to do them this winter. He took six swarms of another man this fall, and is to pay for all he winters. He has them all ready for winter, but two or three; he makes a box a little larger than the hive, and puts it on, then he fills it with sawdust. We have Blue Eyes too, but it is a boy. He is the only brother I have. I have four sisters. If you think this letter is worth a book, please send me Pilgrim's Progress.

MATIE MCCRORY.

Jerome, Ohio, Dec. 25, 1882.

To be sure, it is, with such a report, friend Matie.

AWAY OFF AMONG THE INDIANS.

My pa used to keep bees in Indiana; he had 11 stands, but last summer we moved to Arizona Territory with the Indians. I have seen but one bee since I have been here, and it was a bumble-bee. There are no bees here, for it is so hot and sandy. We get all our honey from California in cans. It is 12½ cents a pound. I like the comb honey best. Honey is good, but the bee-stings are not. Pa had a bee-smoker and a plane to make hives. We found a swarm in the church-yard. We put them in a hive, and took them home, but they soon left. Pa had one chaff hive; they were all Italians. We have no snow here, only on the mountains. I go to school, and sit with an Indian boy named Lewis Nelson.

JIMMIE ELLIS, age 11.

Tucson, Pima Co., Ariz., Dec. 1, 1882.

THE BOY THAT COULD FIND QUEENS BEFORE HE WAS 3 YEARS OLD.

My little boy, 2 years and 8 months old, could, last fall, find a queen bee when caged with 30 or 40 bees. He would say, "I want to show papa queen bee," and then would find her. In the summer he would come and stand by the hives while the frames were being taken out, and take as much interest in the whole transaction as myself. Although stung twice, he was just as keen as ever, and even now wants me to come and see the bees.

L. G. HALLUP.

New Hamburg, Ont., Can., Dec. 20, 1882.

And so, friend H., your boy might be of considerable service to some who have kept bees nearly all their lives, and can not yet find a queen. Who can say it will not pay to have a juvenile bee journal?

Happy Christmas to you! But then, I don't know you; but I think, from the size of your paper, you are not very big. Pa had two hives of bees on a hill about half a mile from our house, where there is a great deal of blue thistle. But some bad boys, I think they were, came along a few days or nights ago, and tried to steal some honey; but pa says they did not know how to go about it, and did not get much. What do you think ought to be done with such boys?

ANGIE BOSSERMAN.

Gettysburg, Pa., Dec. 25, 1882.

My way of doing with such boys, friend Angie, would be to get them to come to Sunday-school; and I think they would be more likely to come, if a girl about your age should ask them, than for almost anybody else. Did your pa leave the hives off on the hill away from any house?

MORE ABOUT OUR FRIEND HANNAH.

I got the book some months ago, and thought it a tip-top one. It is a nicer one than the other. Hannah is not bothered yet with honey, but she has enough of syrup. My cats and rabbits are getting along well. For a while Hannah owned the rabbits. Mother had five birds, and four of them died.

ROSEY E. SMITH.

New Hamburg, Ont., Can., Nov. 10, 1882.

I thought I would write you a letter. I love to read the JUVENILE. Pa has 17 hives of bees, and he takes GLEANINGS. I don't believe pa could do without it. He has two Holy-Land queens, which are very nice. I love to watch the bees work, but I am afraid of them. They don't like me very much. Pa took off some honey in section boxes, which was nice. This is my first letter. Will you please send me Ten Nights in a Bar-Room?

ADDIE WISEHEART, age 14.

Graveland, Ind., Nov. 12, 1882.

Mamma has 11 hives of bees. She started with one in the spring. I am going to have a swarm next spring, if mamma's live. She has them all filled with chaff cushions. I am going to help her take care of the bees. I love to watch them work, and I like honey too. I have a colt, and I am going to break him to ride. I have a duck and turkey and rooster. Please send me a book.

LOUIS MARCH.

Tecumseh, Johnson Co., Neb., Nov. 2, 1882.

A LETTER FROM THE SEA-SHORE.

It has been so dry that papa's bees didn't make much honey this year. They like sumac the best, but that doesn't yield much. Papa's farm is on the sea-shore, on a neck of land, and we have a nice bathing-beach. I should like to send Blue Eyes some cunning shells.

MABEL L. POTTER, age 9.

Fairhaven, Mass., Dec. 1, 1882.

Many thanks, Mabel. We should like very much to see the shells when it gets warm enough so you can gather them.

LETTER FROM A YOUNG 9-YEAR-OLD PRINTER.

My pa used to keep bees when he lived on the farm. Now he prints a paper called the Chautauqua *News*. When I am out of school I set type. When I get hungry for honey I come up to Uncle's and stay awhile.

NELLIE SHELDON.

Summerdale, Chaut. Co., N. Y., Jan. 3, 1883.

Only nine years old, and a girl too, and setting type! Nellie, please mark a place in your paper where you set, and send it to me.

My pa had 14 hives in the spring; they have increased to 38 by natural swarming. He has 23 in chaff hives, and the rest in American hives, but he wants to get them all into chaff hives. Pa dreamed that he orderd a lot of the Jones honey-pails, and they all came together on a string. I have two sisters and one brother. I go to school week days, but we have no Sunday-school. My pa takes the JUVENILE, and he likes it very much. My pa's name is J. T. Powell, and my ma's name is Hannah Powell. I should like Ten Nights in a Bar-Room.

CORA POWELL, age 12.

Sand Hill, Mo., Dec., 1882.

A funny dream, sure enough, Cora. But can't some of you folks start a Sunday-school in your place? I believe you could make a grand success of one.

HOW TO SET A BEE-HIVE IN A TREE.

My pa has 19 stands of bees. They are placed under a shed, which is covered with a grapevine. Pa trianed it so it hangs over the front, and it makes a nice shade for them in the summer. We also gathered some nice grapes from the vines. We have one stand in a cedar-tree. A big limb in the center is sawn off, and a plank nailed on to set the hive on. The limbs come up on each side, which make a nice shade and shelter for them.

JESSIE ALVERSON, age 14.

Gosport, Owen Co., Ind., Sept. 26, 1882.

BEES NEAR LARGE RIVERS.

As my pa has all he can do without working with bees, I have undertaken the job, and will try to see if I can make them pay. We live on the Ohio River, and our bees go over to get stores; and when it is chilly, and they are coming back loaded they fall into the river by thousands, and are drowned.

JOHN M. HOBBS.

Middleport, Meigs Co., O., Dec. 30, 1882.

You have made a good point, John; and that is, that bee-men should avoid locating too near large rivers.

Ma had two swarms of bees last spring, and my brother, who is ten, only one. One of ma's colonies swarmed. She has 4 now, and my brother had six new ones. He now has 16. Our bees did not make so much honey as we read of in GLEANINGS. A good many keep bees around here. Ma sent and got alsike clover to sow for the bees to work on.

Wickliffe, O., Dec. 29, 1882. IDA FIELD.

If she had two and had only 1 swarm, I don't see how she has *four* now? How is it, friend Ida?

DON'T LET THE BEES BE KILLED.

Papa has 28 colonies of bees. A man gave him one for robbing them. He was going to kill them, and take their honey. Papa told him it was wicked to do so. He told pa if he could do any thing with them he might have them. Pa fetched them home and gave them honey, and they are all right. I think that was better than to kill them; don't you?

JIMMIE JONES.

Cowden, Shelby Co., Ill., Dec. 25, 1882.

To be sure, I do, Jimmie; and I am glad to hear you papa is humane as well as enterprising.

Papa has kept bees 7 years. He has 75 stands—35 in chaff, and 40 in the cellar. I put together 1000 sections last summer. The bees made most of the honey from the basswood-trees. I went to school one term. I had the mumps, and had to stay out of school this winter.

BERTIE A. GILLETTE, age 8.

Le Roy, N. Y., Dec. 20, 1882.

There, I guess I know you, Bertie. Isn't your father the man who makes tin points? So he has half of his bees in the celler, has he? I almost wish I had fixed ours so, and then may be six wouldn't have been dead.

HOW ANNIE EARNED HER BEES.

My mamma keeps bees. We had two hives last spring, and they swarmed three times; they are all full of honey. We winter our bees in a bee-house, so as to keep them from the weather. I like to go to the bees, and see them come in loaded, they look so nice. One day all the rest of the family were away from home, and the bees swarmed, and I made them alight low; and when papa came home he hived them for me, and said I could have them, for I had watched them, and not let them run away. I like to work among bees.

ANNIE E. MITCHELL, age 12.
Glen Myer, Ont., Can., Dec. 29, 1882.

FROM 12 to 26, AND 3500 LBS. OF HONEY.

My pa has 26 colonies of bees, and took out 2500 lbs. of extracted honey, and about 1000 one-pound section boxes this summer. We got an extractor and a honey-knife from you, and like them very well. I help my pa when he works with the bees. We have them all in chaff hives. We had 12 colonies this spring which increased to 26. HARRY BOOS.
Somonauk, Ill., Jan. 1, 1883.

Why, Harry, you have given us one of the "stunning" reports. Your father's 12 colonies have been worth more than some *farms*. How much did the honey sell for?

Papa has 18 stands of bees. I love honey, and I like to see them swarm. Papa beats the big bass drum; that brings them back when they start to go away. I have a little sister three years old. She likes the bees because they make good "yassey." I like to read GLEANINGS. I go to school, and am eight years old. HARRY RUSSELL.
Lincoln, Ill., Nov. 24, 1882.

It is pretty well agreed among bee-keepers now, Harry, that beating on pans, drums, etc., does no good in making swarms stay or return. Much has been written on this subject, which will be profitable for you to read. What is "yassey," I'd like to know?

THE HIVE THAT DIDN'T SWARM FOR 11 YEARS.

We have 12 swarms. I help tend them. The way we got our first swarm, it went through our yard and we followed it to the woods. In the evening pa fixed up a small store-box and hived them in that. That was two years ago last spring, and we left them in their hive till last spring, when we had them transferred to one of your L. hives. We got another swarm then from my aunt (pa's sister). She had a hive that had not swarmed for 11 years. We got 3 swarms from that one the first year. Now, Mr. Root, if you think I deserve a book, Ten Nights in a Bar-Room will be my choice.

MINTHA HARSH, age 14.
Marshallville, O., Dec. 30, 1882.

SOMETHING MORE FROM THE ROLAND CHILDREN.

We have 80 stands of bees. My sisters, Helen and Anabel, have been to Ohio. I have 4 sisters and a brother — Anabel, Bertha, Helen, Adah Ethel, Roy. This is my first letter. We have three cows and one calf, and fifty chickens and three pigs. We have an engine and mill, corn-sheller, and sawing-machine.

JOHN ROLAND, age 9.
Grandview, Ia., Dec. 31, 1882.

We are very glad indeed to know you are getting on so well, friend John, for I have often thought of you since the sad letter came from your sister, which we printed last September. While your sisters were clear out here in Ohio, I should have been very glad to have seen them. With all the machinery you speak of, if you keep it all running at once, I can imagine you have almost as much care as I do at times. Good-by, John, and give my respects to Anabel and the rest.

I will tell you about our bees. They are all right now. We have lots of honey. We have 34 hives of bees. I go to Sunday-school. We are going to have an organ in our schoolhouse. LIZZIE JOHNSTON.
Danforth, Ill., Nov. 19, 1882.

"Bees are all right, and lots of honey." Well, that is right to the point, and covers the whole ground, for all I can see. Well done, Lizzie.

Pa has 30 colonies of bees; he thinks a great deal of them, especially his Italians. They have not been much profit to him this year, as there has been the greatest bee-famine since the middle of June that there has been for years. Pa takes GLEANINGS. I love to read it. We little folks think it quite a treat for you to send us the JUVENILE.

DORA B. THARP.
Eagle Mills, N. C., Nov. 26, 1882.

HONEY IN THE BIBLE.

I have been trying to find an answer to the Bible question which Cora M. Thayer gave us juveniles to find out. I can not answer the question she asked, but I think I have found out yours. Is it not I. Samuel 14:27 and Judges 14:9? May I ask one? "My son, eat thou honey, because it is good."

MAY E. HIGGINS.
South River, Md., Jan. 3, 1883.

Correct, friend May. Your question is asked in another letter, and you will find in this same letter an answer to the question that was "too much" for you. I hope all the little friends will read the history of Jonathan, the loving man, and Samson, the strong man.

ANOTHER LETTER FROM "HANNAH."

Father's bees and Uncle James Facey's have a slight touch of the dysentery. I see in Hugh Miller's "Testimony of the Rocks," that the first bee makes its appearance in the amber of the Eocene, locked up hermetically in its gem-like tomb, an embalmed corpse in a crystal coffin, along with fragments of flower-bearing herbs and trees. In answer to Cora M. Thayer, Proverbs 25:27. In answer to your question, Jonathan and Samson. Where in the Bible does it say ye shall not offer honey in sacrifice made by fire? Rosey says we are not all honey and syrup; we have quite a few vinegar-barrels.

HANNAH M. SMITH.
New Hamburg, Ont., Can., Jan. 1, 1883.

Right, Hannah; and now for a hunt for an answer to your question.

100 LBS. A WEEK, AWAY DOWN IN MAINE.

My uncle Cecil has kept kept bees since a year ago last fall, and they swarmed twice. They made honey enough themselves, and there were two or three weeks when they made about 100 lbs. a week. He has put them in the cellar for the winter. He has no chaff hives, but is going to have some next winter. His bees get honey from buckwheat. "It is not good to eat much honey," is found in Proverbs 25:27. Where in the Bible does it say, "My son, eat thou honey, because it is good"?

GEO. F. GREELY, age 10.
Clinton, Kennebec Co., Maine, Dec. 30, 1882.

If your uncle has only four or five hives, friend George, 100 lbs. a week would do pretty well; but if he has 40 or 50 hives it would not be much to brag of. Do you see? You did not tell us how many he had, at all.

Pa had 16 stands of bees in the spring; he increased to 42, and got 300 lbs. of honey. He fed 600 lbs. of white sugar in the fall. He has them in the cellar. We belong to the Methodist Church. We go to Sunday-school in the summer. I have two sisters and two brothers. The youngest sister was one year old on Christmas. She has blue eyes. The Bible question that Cora asked, you will find in Proverbs 25:27. In answer to your question, wasn't it Samson and his father? This is my first letter, and if I deserve a book, please send me Ten Nights in a Bar-Room. JOHN WESLEY SWITZER, age 13.

Fergus, Ont., Dec. 28, 1882.

That we will, "John Wesley." The first time I ever spoke in church was in a Methodist meeting. Don't you think I am almost a Methodist?—We are not so sure that Samson's father ate honey at all; see answers on preceding page.

I think the answer to Cora M. Thayer's question is Proverbs 25 : 27. Your question also, John, in Matt. 3 : 4; Jonathan, I. Samuel 14 : 29. I go to school this winter when I can. I have a very kind teacher. I should like to see Blue Eyes very much. Now, uncle, can't you make it pay to have a picture taken of your place, family, help, etc., just like every-day life, and put it on one of your counters, to be bought by our bee-keeping relatives? I should like one. How many of our cousins would like one too? I am glad that my brother has renewed his subscription for GLEANINGS, so I can read JUVENILE another year, for I like it very much. ALICE I. DEYO.

Homowack, Sull. Co., N. Y., Dec. 25, 1882.

Why, you see, Alice, we have given pictures of our place with the A B C, and I am giving you "pen pictures" each month of what we are doing. However, I will think about the other picture, and may be we will have *something* of the kind. Thank you. It would take a pretty big picture to take in all the "help," Alice.—Your answers are very good, and show that *three* men in the Bible ate honey. The answers above give the names we had in mind. Who can mention another man in the Bible who ate honey?

We have 38 swarms of bees in chaff hives, stuffed with prairie hay, in good order for winter. Father is making hives for next summer. Last summer my bees swarmed. About half of them alighted on a little tree close to the hive, and the rest of the swarm flew around the house and settled on a tall tree. What made them do that? If this letter is worth a book, please send me Ten Nights in a Bar-Room. Brother Luke will write in this letter.

PRYER LINDLEY, age 9.

I have a little brother who is a year and a half old. He visited the apiary three times last summer alone and did not get stung. He would stoop down at the hive to see the bees. I have a hive of bees, and intend to be a bee-man some time. I love to read.

LUKE LINDLEY, age 7.

Lawn Hill, Iowa, Dec. 25, 1882.

I guess there is a "pair" of little ones at your house, aren't there, Luke?—a little bee-man and a little letter-writer.

LETTERS FROM THE TWINS.

We are very glad to call you uncle, as we have but one uncle in the world. We should like to live near you, if you can talk as well as you can write. We all like GLEANINGS. Grandma keeps bees. She has 6 stands. She had a swarm of bees that she hived 3 times, but they would not stay hived. She said I might have them if I could keep them. I hived them four times, and then they went away, so I have no bees. MINNA J. DICKENS.

This is more evidence to prove the difficulty of keeping swarms when they resolve to go. How did you try to keep them at home? Did you use pans and drums, as one of our little friends speaks of doing?

I think that it must be nice to have so many nieces and nephews. Mina and I are twins. We are twelve years old. Grandma is going to send for an extractor and a smoker in the spring, if her bees winter well. We have no Sunday-school nor public school near enough for us to go to. ANNA DICKENS.

It seems too bad, Anna, that you can't go to school at all.

HARRIET'S LETTER, AND MY BIRD STORY.

My pa keeps bees. He has had them a long time. When he wanted any honey he used to kill the bees, and get the honey. They all died winter before last. He bought another hive of bees a year ago last spring. They are pure Italians, and he has 14 stands now. When my pa wants honey he uses an extractor. He gets lots of honey. He says he would never kill any more bees for their honey. We have 22 tame canaries, and what a noise they do make! This is my first letter. HARRIET WYATT, age 12.

East Williams, Ont., Can., Dec. 20, 1882.

And that reminds me, friend Harriet, of a little story I heard about a canary. The lady didn't have 22, though, as you have, but she had only one. Well, she used to open the door of the cage, and let that one out, so he could fly around the house when they two were all alone together. What do you suppose he used to do when he got out? Why, he would get into the dirt in her flower-pots beside her house-plants, and scratch and wallow, just as hens do. Sometimes she would go into the other room, and then Birdie would get lonesome. If he couldn't hear her he would call out, "Tweet! tweet!" And then she would say, "Yes, Birdie," and then he would whistle and sing, to let her know he was satisfied. Well, one day he called, "Tweet! tweet!" and she called back, but he didn't seem satisfied. He kept saying, "Tweet! tweet!" right along, and wouldn't whistle at all. As she was very busy, she didn't go in right away, but pretty soon she thought his "Tweet! tweet!" sounded rather fainter, and she looked in to see where he was, and what do you think? Birdie was almost drowned in a big bowl of water. I suspect he thought it would do to take a bath in, and so hopped into it, just as he would into the dirt; but it was so much larger than his own bath, that he went down in all over; and then when he could not get out, the poor little fellow called to her the best way he could, and she only kept saying, "Yes, Birdie," and didn't come to take him out at all, until he was almost chilled to death, with the naughty water in that great awful bowl. But she did get him out, and dried him by the fire, and he got well, and sang as well as ever. Aren't you glad? I am. The lady told this to my wife.

I will give you papa's report for this year. In the spring he began with 19 stands of bees, and increased to 55. We did not get much honey this year, because the bees swarmed so. Papa has taken off about 400 lbs. of honey. Most of his bees are Italians, and in Simplicity hives. He got all of his hives from Mr. Flanagan.

SWARMS RUNNING AWAY.

One time when he was gone for hives, 3 swarms of bees came out, and before he got back they had gone to the woods. We had 6 or 7 swarms of bees go to the woods this year. We were taking off honey from a very cross hive of hybrids one time, and the bees came out and stung us all. Papa says he got stung 40 times. Mamma got stung on her hand and in her eye, and I got stung 3 times on my head; but I do not think bee-stings hurt much.

PLUMS.

We have the plums, "big as a peach," but we did not get $7.00 a bushel for them, but we got 40 cts. a gallon, which would be $3.20 a bushel. Would you like a tree? If you do, I will send you one. We call them the wild-goose plum. We sometimes picked up 50 gallons of plums in a day. Papa has also a farm, and he could hardly be in the field a minute, before the bees would swarm.

CATNIP.

We had a patch of catnip, and the bees were just roaring on it all summer. I saved a pound of seed. Do you want any? If so, what is it worth?

MAUD WHITESIDE, age 13.

Belleville, Ill., Dec. 14, 1882.

And a right good report it is, Maud.—It seems to me your pa lost almost as much as he gained the day he went after hives and let three swarms run off to the woods.—I should be real glad to get a tree of the kind you mention. We had a wild-goose plum-tree; but when the men were building our new house, somebody ran over it and broke it all down.—I think we have all the catnip seed we can use now, thank you.

WHAT HIVE TO ADVISE, ETC.

We live in town. Pa bought one swarm of bees last July; got 50 lbs. of honey from them. One swarm came out, but it ran away. He bought eight more swarms last fall. They are packed in planer chips. He wishes to transfer them to other hives in the spring, and would like to know what hive you think the best; also what will stop bees when they start to run away. Pa sowed some sweet-clover seed, and expects to sow some alsike, spider plant, and catnip, in the spring. I think you are very good to give the juveniles such good books, and so much space in your paper. Please send me The Roby Family, if you think I deserve it.

MAY FOOTE, age 14.

Creston, Iowa, Dec. 26, 1882.

What hive is best? is very often asked. If you mean without regard to cost, I should say the chaff hive. If you wish to extract honey only, the chaff hive fitted for the extractor. If you want the best hive for a little money, I should say the Simplicity hive; and if you expect to carry your hives into the cellar winters, I don't know but the Simplicity is as good as any, and they are a great deal easier to carry than chaff hives. All things considered, I would advise every apiarist to have about an equal number of chaff and Simplicity hives, but to winter mostly in chaff hives.—When bees start to run away, throw dust or dirt among them, if you can. Sprinkle them with water, with a pail and dipper; use a fountain pump, if you have one; break up their ranks with sticks or clubs; chase after them, and see where they go; and some folks think making a noise to drown the note of the queen will make them come down, but it may be a mistake. To stop runaway swarms is, in short, sometimes the great problem.

A PUZZLE FOR THE JUVENILES.

MYPAHAS47HIVESOFBEESTHEYAREINTHE
CELLARMYBROTHERSANDIHELPEDGETTHEM
INWEDREWTHEMONASLEDFROMCHARLEY
WHITING7

Venice, Cayuga Co., N. Y.

There, my chicks, who can read that? It is just exactly as I received it, and it is just as a good many of the wee ones write; but I suppose it is the best they can do, and I wouldn't have them stop writing, for any thing. While I think of it, some of the old ones, too, squeeze their words and letters up so closely it makes it quite a puzzle to get at just the truth, and then sometimes we don't, and troubles come. I'll tell you how I would do it. I would take twice as much paper as I intended to use. Then I would commence at the top, and make calculations to have a lot of blank space left below. Always have ruled paper (we have now some nice paper, nicely ruled, for only 15 cts. for a quarter of a ream—who will tell how many sheets there are in a quarter of a ream?) and when you get pretty near the end of the line, don't try to squeeze another word in, but just commence on the next line. Put in all the commas; and when you are not sure, put in a few too many. You will learn how after a while. When you get to the end of a sentence, always put a period, and then take a little more room, and commence with a capital letter. Omitting these capital letters, when they commence a new sentence, is one of the worst habits, I tell you. We have had some of the worst kind of blunders in business, because the writer didn't use a capital letter when he began to talk about something else. Now, you children have plenty of time, and usually plenty of paper, I think, and I want you to learn to write real nice clean plain letters. Now, my little Charley, I want you to write me a nice little letter, with spaces between the words, won't you? and then, you see, I shall know you haven't felt hurt at what I have said. We're good friends yet, are we not, Charley?

WHAT MADE THEM STING SO?

My brother Charlie has six swarms of bees now. The old swarm in the log I wrote about last June died this fall. He extracted about 200 lbs. of honey, and the bees have plenty to winter on. He packed them in hemlock boughs, and they look as nice as if they were on a Christmas-tree. They swarmed four times last summer, three times when Charlie was gone, and ma had to hive them. Once she had been using coal oil, and looked out the window, and saw the bees coming out, so she slipped on some kid gloves and started for them. As soon as she began to brush them into the hive they began to cluster on her hands as if the queen might have been there, but every one stung her hands.

ABNER STRONG, age 9.

Millington, Mich., Dec. 22, 1882.

I think, Abner, that it was the kid gloves that made them sting so viciously, but the coal oil on her hands may have had something to do with it. I am very sorry she got stung so badly.

I came home to spend Thanksgiving. I have been away to school, and I found Albert and Gertie had been writing for a book, and I thought I would. I wrote once before and got a book. I will tell you how strangely our bees acted last summer. Pa put a swarm of bees into a new hive, with the fdn. all in, and they stayed about two days, and then left and went to the woods. Pa went away from home one day, and there was a swarm which came out, and mamma put them into the same hive, and they went away, and then pa said he would examine that hive and see what the trouble was, and he couldn't find any thing wrong, except that the fdn. was cut so the honey-cells were crooked, and he thought they were disgusted, and so they left. Do you think that would make any difference? Pa has been very particular since then to get it straight. My sister has a little bantam hen, and it is very tame.

EDITH M. HALL, age 12.

Northfield, Minn., Dec. 2, 1882.

LETTER FROM FREDDY CRAYCRAFT.

We have two colonies of bees. They are fed and packed up for winter. We had a very nice Christmas. There was a Christmas-tree at the church, and papa made me a present of a nice watch. Our greenhouse is full of flowers, and they are in bloom. I wish you a happy Christmas and a merry New Year. Please find inclosed the specimen of a patent Kentucky bee-hive. FREDDIE CRAYCRAFT.

Salem, Ind., Jan. 1, 1883.

With the above letter Freddie sends a circular which is headed as follows: —

THE UNMEDDLED,
SELF-PROTECTOR, MOTH-ROLLER BEE-HIVE!
INVENTED BY JOHN PHILLIPS.

I suppose the "unmeddled," means the hive is not to be opened and the frames taken out; and there is very good reason indeed for it, for it is a box hive, and therefore has no frames to take out. The "moth roller" is some kind of a "patent" to roll the moths out of the hive themselves. Would not that be funny, children, to see the moths keeling over backward out of the hive, when they couldn't help themselves? Patent moth-trap hives are rather behind the times now, and we guess friend Phillips must live back in the woods somewhere where they don't have bee journals.

GERTIE'S LETTER.

My pa has 63 colonies of bees, all in Langstroth frames. I have a colony. It has 15 frames, and has made the most honey for the last 2 years of any in the lot. I don't know but I cheated myself. I gave pa all the increase and honey, except one section every time a crate is taken off. I help take care of them, and put the sections together. This has been a poor year for honey here. The old swarm has made only about 40 lbs.

QUEENS FLYING FROM A COMB WHEN THE HIVE IS OPEN.

Pa and I went out to clip the wing of a Holy-Land queen which we got of Mr. Alley last summer. When we took the frame out she flew and did not come back. Do you think she has gone back to the Holy Land?

LONG TENEMENT HIVES.

Pa thought he would see how bees would do in long hives close together, and so he made two chaff hives. He put 4 swarms in one hive on 12 racks each, and on the other he put 8 swarms having 6 racks each, divided by division-boards down between the frames. Half fly out one side, and half the other side, and each hive is painted a different color. They look nice. This is my first letter. If you think I deserve a book, please send me Ten Nights in a Bar-Room.

GERTIE A. WILLIAMS, age 13.

Lottsville, Warren Co., Pa., Jan. 1, 1883.

I don't think it was a very bad "cheat," Gertie, if your father was the gainer?—No, I don't think the queen flew across the ocean to Palestine, but I do think she went back and entered some hive pretty close to her own, within 15 minutes or half an hour. I don't think I ever had a queen fly in that way without finding her pretty soon, either dead or alive, in front of some neighboring hive, if she didn't come back to her own home. I would always leave the hive open, and the frame as near where it was when she went off as I could, until she was found. —Long tenement hives are an old idea, but I believe almost every one gives them up, sooner or later.—Your letter is well worth a book, friend Gertie.

Reports Encouraging.

FRIEND LAY, AND HIS ANTICIPATION FOR THE NEW YEAR.

OUR Cincinnati visit was an exceedingly pleasant one to myself, and it seemed that all enjoyed themselves very much. I indeed consider it a rare treat to listen to the very pleasant and highly interesting talks from such eminent men as were assembled on that occasion. I shall never forget the genial spirits whom I met there. *Let's have another.* The winter so far has been mild and pleasant; the mercury reached 28° above zero Dec. 16. Bees are in fine condition; they have not been confined longer than 2 days at a time. They will begin to get pollen in about 15 or 20 days.

Will you be kind enough to say to the boys up in your part of this great national apiary, not to let *horsemint* and Cyprians trouble their dreams, but to wait and listen? for ere the 4th of July guns boom upon midsummer air we are going to send up some bee and honey reports that will startle the natives from Maine to Wisconsin, and then, leaping the Rocky Mountains, will cause a mighty rattling among the white-sage bushes of old California. Under the genial warmth of our bright skies, and nursed by sea-born zephyrs, our honey-plants are already springing into life. Give a Texas hoosier plenty of horsemint honey and milk, and you can not keep his tongue still. J. H. LAY, M. D.

Hallettsville, Texas, Dec. 27, 1882.

THE ONE-HIVE APIARY THAT WOULDN'T STAY SO.

I started with one stand, and now I've so many I must either become a bee-keeper or get rid of some of the bees. Which? MRS. M. A. SHEPHERD.
Barry, Pike Co., Ill., Dec. 29, 1882.

FROM 2 TO 10, AND 800 LBS. HONEY.

Bees did well here this year. I started with two stands; increased to 10; could have had 20, and 800 lbs. honey, mostly extracted. WM. HILLS.
Ironton, Mo., Dec. 26, 1882.

I have 20 colonies, mostly hybrids, of all grades. Started with 6 stands in spring, and made 250 lbs. of extracted honey; all sold in town at 20 cts. per lb., and call for more. JACOB FISCHER.
Elizabethtown, Ky., Dec. 30, 1882.

My report for 1882 is as follows: 2500 lbs. comb honey, sold at 20 and 25c in New York. Very little increase in stocks; 84 colonies packed in chaff on summer stands, constitute the number of colonies that I have at present. ALBERT BRUSH.
Susquehanna, Pa., Dec. 27, 1882.

152½ LBS. TO THE HIVE, AND THREEFOLD INCREASE.

I don't think my bees would work for me if I did not do according to instructions in A B C and GLEANINGS. My bees have done very well this summer. Average yield per colony, spring count, was 152½ lbs. and increased threefold. E. S. COLLINS.
Cedar Lake, Mich., Dec. 28, 1882.

My 8 stands of bees did well this year. They average 100 lbs. per stand. How is that for a beginner? I cut off a limb of a tree with a swarm in it, and took 15 lbs. of honey from them. I tried to save them, but the little pets got drowned, and so I lost them. LOUIS WERNER.
Edwardsville, Ill., Dec. 28, 1882.

My bees are mostly blacks; a few colonies are hybrids, and two Italians. I had 30 colonies last spring, mostly in good condition. Increased to 45 and sold 3000 lbs. of honey in section boxes, at 20 cts. per lb., besides using all that a family of seven wants to eat, and gave the neighbors perhaps 75 or 80 lbs., so you see I still think the blacks worth caring for.
Delaware, O., Jan. 2, 1882. W. T. ROPP.

PENNSYLVANIA NOT TO BE COUNTED OUT.

Some one says, "Cross Pennsylvania out;" they had better not be so fast; although there are better places, we shall not quit bee-keeping. It has been a very bad year, but we have some honey. I started in the spring with 30 colonies; increased to 56, and took 1000 lbs. of comb honey, and 1000 of extracted. A. W. LINDSEY.
West Brooklyn, Pa., Dec. 25, 1882.

The like was never known before, of such a yield of honey as we have had during the past season, in this part of the State. In fact, it was a honey harvest all summer. It was hard work for us to give our 160 colonies all the room they needed for storing. Many of our colonies gave over 200 lbs. to the hive, while a few did nothing; and such, I will take care that their queens' heads come off in the spring. Honey crop, 16,000 lbs. JAS. SPENCER.
Woodburn, Iowa, Jan. 10, 1882.

THE FIRST REPORT OF HONEY IN 1883.

The bees are working to-day on alfilaree, pepper, eucalyptus, lemon, lime, and orange blossoms; within the past 3 weeks they have filled their hives so completely that I shall have to extract in order to give the queens room to breed. E. GALLUP.
Santa Ana, Cal., Dec. 23, 1882.

Well, friend Gallup, that is a big contrast from our report this 8th day of January. Our bees are out in the zero weather, and six out of our 185 are dead already. No reason could be assigned, except that they had eaten the honey all around them, and the cluster was too small for them to move over to it. There, I declare I forgot this was the department for Reports *En*-couraging.

KIND WORDS FROM OUR CUSTOMERS.

Those circular saws are just splendid; they are not for sale. G. S. DENNISON.
Tiffine, Iowa, Jan. 1, 1883.

Don't you see that I can not do without GLEANINGS? You can not get rid of *me* for *one dollar* a year. LEONIDAS CARSON.
Frederick, Ohio, Dec. 19, 1882.

Inclosed please find 91 cts., for which please send me another telephone. This is about six I have ordered. JAMES E. TILMAN.
Akron, Fulton Co., Ind., Dec. 22, 1882.

Will you please send the Dec. number of JUVENILE? I suppose one was sent, but was lost on the way, and it is causing considerable lamentation among the juveniles here. T. A. WHITESIDE.
Belleville, Ill., Jan. 1, 1883.

"DO THEY MISS ME?"

Goods arrived in splendid condition. Many thanks. But oh! the JUVENILE GLEANINGS has not come this month, and the children are almost crying about it.
White Lick, Ind., Dec. 27, 1882. A. COX.

I had 5 stands last spring. I went to work and fed them up; they went to work, and made *me* nearly 100 lbs. to the hive. I give all the credit to the fdn. I got of you. I have 13 stands wintering nicely so far. C. M. BENNETT.
South Charleston, Clark Co., O., Jan. 1, 1883.

THE 75-CENT TELEPHONES.

The telephones have been giving splendid satistion — so much so that most of our neighbors have concluded to have one. Inclosed please find 91 cts. for another one. Had I known so many were wanted, I might have inclosed all in one order.
Akron, Ind., Jan. 1, 1883. JAMES E. TILMAN.

My brother, do not consider your efforts vain, or that they will be lost, while you are striving to elevate the *moral* standard of the young; for upon these the great future hope of our country depends. Press home in the future, as in the past, the great importance of sobriety in habits and morals, and that strict honesty is essential to permanent success in life. As the circulation of your publication increases, your *ability* to do good, and your *responsibility* also, increases. May the good Lord direct you aright! J. Y. KEZARTEE.
Ceresco, Mich., Dec. 28, 1882.

[And may God bless you for your kind and cheery words, brother K.]

FROM A CALIFORNIA MOTHER.

Your card of acknowledgment came three days after I sent my last postal. Where I lived when a girl, the boys used to come around early Christmas morning, singing,

> "Wish you a merry Christmas and a happy New Year,
> A pocket full of money and a cellar full of beer."

I wish you the same, only change the last letter of the last word into s. Ernie says, "Thank Mr. Root for the nice books you sent him." I also thank you, for it is a help to him about learning. He reads well in his school-books, but hesitates about trying other books till he had one of his own sent by Mr. Root for the little letter he wrote. Now I can get him to try almost any thing in the shape of juvenile reading. MRS. JOEL HILTON.
Los Alamos, Cal., Dec. 29, 1882.

Juvenile Gleanings.

JAN. 15, 1883.

Contents of this Number.

Annie and her Bees.........150
Bees in a House..... 147
Bees, Killing..................150
Bees near Rivers.... 150
Bees Choosing Location ...146
Bird Story....................152
Candy, The Good............156
England 149
Fdn. Mills......................156
Fdn., Price of............. ...156
Hannah......... ....150, 151
Harrison, Mrs.... 146
Hatching Cells under Hen..148
Hives, Long Tenement......143
Hive, Which?.. 153
Hive in a Tree................150
Hive, The Unmeddled.... ..154
Honey in the Bible..........151
Honey, First in 1883. 155
Maine Letter........ 151
Maple Sugar, etc............156
Moth Worms...................149
My Neighbors..................141
Name, A Great.................143
Non Swarmers.................151
Puzzle for Juveniles.........153
Queens Flying from Comb..154
Reports, Various.............155
Robbed to Death.............148
Roland Children..............151
Swarms Running Away.....153
Telephones ... .155
Value Received 146
Virgil... 144

And thine ears shall hear a word behind thee, saying, This is the way, walk ye in it, when ye turn to the right hand, and when ye turn to the left.—ISA. 30:21.

TRADE is better than ever before, so early in the season, but we are not so much crowded but that every thing goes off promptly, with but few exceptions.

THE excellent sledding we have been having for the past few weeks has given us a chance to buy a large lot of extra nice basswood for sections. We have a fine stock already piled in the warehouse, against the time of need soon coming.

PRICE OF WAX AND FOUNDATION.

WE are obliged to give notice, that after Feb. 1st the price of foundation will be advanced 3 cents per lb. This will make 25 lbs. or less, an even 50 cents per lb. The same thin, for sections, 60c. As usual, 1 cent less for regular-sized sheets, and another cent less for regular-sized boxes that we have all boxed ready to ship. For good wax, we pay 28 cents cash, or 30 cents in trade.

THE GOOD CANDY FOR WINTER FEEDING.

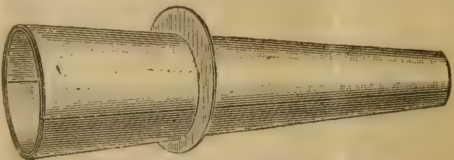
IN making the Good candy, be careful that it is not too soft. Our apiarist had a lot that was just right, but was so hard he could not spoon it out fast enough to suit him, and so he stirred in more honey. The consequence was, that when it got warmed up it ran down between the combs. Let it be hard, and cut it out in chunks with a knife, if necessary. It looks to me now as if it bid fair to supersede all feeders and other methods of feeding.

FOUNDATION MILLS FOR 1883.

FOR the first time, foundation mills are now made in our own building. I have purchased the entire business, both of friend Olm, of Fond du Lac, Wis., and friend Washburn, of our own place, with all the tools belonging to both. We are prepared to put hands enough to work at the business to turn out a complete mill every day, if need be. Our rolls are now made of a very much harder metal than those made heretofore, and on this account they may not look as smooth as our old ones; but the fdn. is exactly what is wanted by the bees, and the wax comes off far better, as you will discover. Our aim is to make fdn. most acceptable to the bees; not that with hard polished wax, even if the latter is a little handsomer to look at. We haven't the mills piled up ready to ship, as we have scales and other goods, but hope to have them so by the time we come again.

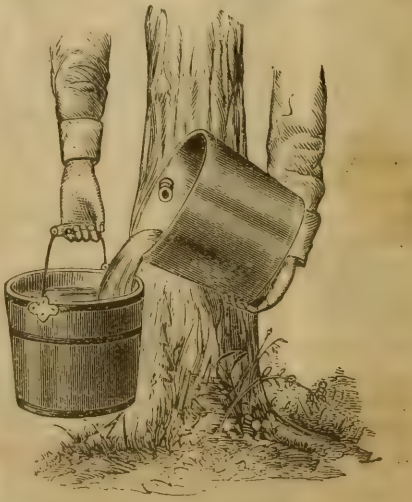
MAPLE SUGAR, AND TOOLS FOR MAKING IT.

NOT a few of our bee friends are probably sugar-makers, and it begins to be time for us to be thinking about our utensils. We have spiles like those shown below, for $1.50 per 100, or $12.50 per 1000.



SAP-SPILE.

They are made of double tin, and finished by dipping them in melted tin, which makes them absolutely rust-proof. Bits, ⅜ inch, for tapping trees, right for the above spiles, 20 cts. each; by mail, 23 cts. Braces to hold the bits, 25 and 50 cents. Postage on the braces, 18 and 27 cts. respectively. Patty pans, for little cakes, from 10 to 30 cts. per dozen.



SAP-PAILS; PRICE PER 100.

	Common Tin.	Charcoal, IC Tin.	Charcoal, IX Tin.
10-quart.	$16.50	$18.00	$20 00
12-quart.	$18.00	$20.00	$23 00

Tin covers for above, $4.50 per 100.

The pails made of common tin will do very well if they are cared for; but they must be warmed, and rubbed with a little tallow on a cloth, and kept out of the weather when not in use, or they will rust sooner than the other. Those made of charcoal tin will stand the rust as well as any tin, but all are much improved by being greased every season when put away. The IX tin is better than the IC only in being heavier, and standing a bruise better; but the IC is considerably the lighter to handle. I have been told, that giving them a thin coat of sugar by dipping them in weak syrup before they are put away is a perfect protection against rust. I presume it would make them a little sticky to handle. The covers are to keep out rain, leaves, bugs, millers, mice, etc.; and, most of all, to keep rain water from running down the body of the trees, and coloring the sap, and so the syrup and sugar. Maple syrup can be made as white as clover honey, and sugar in the same proportion, and then you can get almost any price you ask, for the first run.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany —
Bee Entomology —
Blasted Hopes 93
Editorials 99
Forgettery —
Heads of Grain 82
Honey Column 56
Humbugs and Swindles 69
Ladies' Department 81
Notes and Queries 93
Obituary —
Remindery 62
Smilery —
"Square List" —
The Growlery 94
Tobacco Column —

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES AND OTHER SHORT ARTICLES.

A B C Child 87
A B C Scholars 63
Asparagus 89
Banner Apiary 57
Bars, Drilling 69
Bees Indoors 92
Bees, Burying 87
Bees, Best Place for 84
Bees to Florida 66
Bees in Mississippi 84
Bees in South Carolina 88
Bees in Wyoming 84
Beeswax, Raising 67
Bee-keeping, Hard 73
Binding Periodicals 90
Blue Thistle 87
Business Men, Our 63
Candy for Cages 56
Cellars, Concrete 83
Circulars Received 100
Comb-closet, Movable 69
Concrete 85
Conventions 100
Drone-layers 81
Enameled Cloth 90
Engravings, Lending 99
Express Money-Orders 99
Fdn. to fill Sections 82
Fifteen from One 93
Flax Straw 84
Florida 93, 94
Frames, Mak'g Home-made 61
Frames, Half-length L 74
Frames of Secs., Wide 88
Frames, Wide 72
Frames on End 93
Frames, Reversible 65
Glass for Robbers 82
Hives, Patent 83
Hives, Two-story 92
Hive, Heddon's Nucleus 74
Hive, Tall, with L. Frames 79
Hive, Controllable 65
Hive, Golden 69
Holy-Land Bees 70
Honey for Regu. Customers 83
Honey, Marketing, etc 57
Honey, Adulterated Comb 71
Honey, Candying 91
Honey, California 91
Honey, Shipping Liquid 83
Honey-boards, Perf. Zinc 85
Honey-dew 85, 93
Honey, Selling 64
Honey-house Items 69, 70, 77
Honey-Room 86
Horsemint 94
Hybrids 85, 90, 91
Jerusalem Letter 70
Jones's Letter 67
Julia 87
Maine 79
Maple, Flowering 64
Market, A Home 83
Millers and Roaches 84
Mills, New Fdn 68, 85
Moth that Squeaks 70
Name, Your Own 100
Neighbors, To Please 72
Nickel vs. Zinc 92
Queen, A Smart 91
Queens, Caring for 88
Queens, Two in Hive 94
Queens, Importing 81
Report, First in 1883 93
Reports, Big 88, 91
Roese's Letter 76
Saws, Foot-power 82
Saw-table, Bar to 89
Screens 70
Sections, ½-lb 66, 72, 74, 75, 77, 86, 92.
Sections, 1½-inch 82
Separators 72
Separators, Wood 86
Simplicity in Details 80
Stings for Neuralgia 93
Smartweed 63
Smoke, for Stings 90
Statistics 89
Sunflowers 78, 89
Swarming-Boxes 87
Swarms, Absconding 90
Table for Honey-house 82
Temperature for Bees 84
Tithing 76
Ventilating 78
Water for Bees 81
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Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

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Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 1tf
*Paul L. Viallon, Bayou Goula, La. 1tfd
*S. F. Newman, Norwalk, Huron Co., O. 1tfd
*Wm. Ballantine, Sago, Musk. Co., O. 1tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2
*Jas. A. Nelson, box 83, Wyandott, Wy. Co., Kan. 5-5
*J. P. Sterrit, Sheakleyville, Mercer Co., Pa. 2-7
Bates & Miller, Barrington, Bristol Co., R. I. 2-4
*Chas. R. Mitchell, Hawkinsville, Pulaski Co., Ga. 2tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
Dr. A. B. Mason, Wagon Works, Lucas Co., O. 2-8
*Jas. O. Facey. New Hamburg, Ont., Can. 2tfd

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 1tfd
S. F. Newman, Norwalk, Huron Co., O. 1tfd
F. A. Snell, Milledgeville, Carroll Co., Ill. 3-2
M. S. West, Flint, Gen. Co., Mich. 1-6
T. G. Ashmead, Williamson, Wayne Co., N. Y. 2tfd
S. D. Buell, Union City, Branch Co., Mich. 2tfd

1883— —1883

ITALIAN QUEENS.

I am now booking orders for queens. I cull my queens as they hatch, is the reason my customers were so well pleased last year. Send me your address on postal, and get circular. Six for $5.00. **J. T. WILSON,**
1tfd Mortonsville, Woodford Co., Ky.

ONE-PIECE SECTIONS a specialty. Pound size, $1.50 per 1000; L. hives, 50c each. Circular free.
2-6d B. WALKER & CO., Capac, St. Clair Co., Mich.

E. T. LEWIS & CO., TOLEDO, OHIO,

Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian supplies. Send for circular. 1tfd

Sweet-Clover Seed.

New and clean, 25 cts. per lb.
1-4 BEN CLENDENON, Grinnell, Iowa.

50 TO 150 COLONIES OF

PURE ITALIAN BEES,

In new, superior, well-painted, movable-frame hives (frames 12¼x12¼ in.), for sale at $6.00 per colony, delivered at depot or express office at Lexington, LaFayette Co., Mo. DR. G. W. YOUNG.
12-2d

Honey Column.

CITY MARKETS.

CHICAGO.—*Honey.*—Prices are unchanged, but the supply is more than equal to the demand. *Beeswax* is scarce, and rules at 27c for bright yellow, cash on arrival; dark and off color, 17@22c.
ALFRED H. NEWMAN.
923 West Madison St., Chicago, Ill., Jan. 23, 1883.

CLEVELAND.—*Honey.*—Honey is quite dull just now; but every other kind of goods is the same; prices, however, have not changed much. Best white 1-lb. sections are selling at 20 cts.; 2 lbs. 19; second quality, 17 to 19. Extracted does not sell at all; have never known it so dull before; nominally held at 9 to 11 for bbls. and kegs, and 12 to 13 in cans. *Beeswax* very scarce at 30. A. C. KENDEL.
Cleveland, O., Jan. 22, 1883.

DETROIT.—*Honey.*—The demand for honey is but very light, and the market is fully supplied. Sales are made with difficulty at 16@18 cts. *Beeswax* is worth about 30 cts. A. B. WEED.
Detroit, Mich., Jan. 23, 1883.

CINCINNATI.—*Honey.*—There is no excitement in the honey market, but sales are fair to our regular trade. Offerings of comb and extracted honey are plentiful. Extracted brings 7@9 cts. on arrival. The sales of comb honey are very slow, although there is a large supply of first-class quality on the market. It brings 12@13 cts. on arrival. *Beeswax* comes in slowly, and is in good demand at 20@30 cts., according to quality. CHAS. F. MUTH.
Cincinnati, O., Jan. 23, 1883.

BOSTON.—*Honey.*—One-pound honey, 20@22; 2-lb. honey, 20; Extracted, 10. *Beeswax.*—None except small lots at very high prices, say 35 to 38 cts.
Boston, Jan. 24, 1883. CROCKER & BLAKE.

NEW YORK.—*Honey.*—Our quotations on honey and wax are as follows: Fancy white-clover, in 1-lb. sections, per lb., 23 to 25c; fancy white-clover in 2-lb. sections, per lb., 20 to 21c; off grades white-clover, in 1 and 2 lb. sections, per lb., 16 to 18c; buckwheat, in 1-lb. sections, per lb., 16 to 17; buckwheat, in 2-lb. sections, per lb., 14 to 15; white-clover, extracted honey, in bbls., 9 to 10c; buckwheat, extracted honey in bbls., 8 to 8½c. *Beeswax.*—Prime yellow, 35c. H. K. & F. B. THURBER & CO.
New York, Jan. 24, 1883.

I have 3500 lbs. extracted honey for sale, basswood and clover, in kegs holding 150 lbs., for which I will take 10 cts. for basswood and 11 for clover, delivered on track at Farley, Dubuque Co., Iowa; if wanted in lots of 1000 lbs. or over, ½ cent off. The honey is first quality, well ripened up in hives. Samples sent if wanted. JAS. SCOTT.
Farley, Dubuque Co., Ia., Jan. 22, 1883.

I have 8000 lbs. of comb honey in ½-inch Langstroth frames; will sell at 14 cts. Also 1000 lbs. in 8-lb. boxes, glassed on one side, at 15 cts., delivered on the cars at Woodburn, Iowa. JAMES SPENCER.
Woodburn, Iowa, Jan. 10, 1883.

We have had a poor season for bee-keepers, but I can make a better report than some of my neighbors. I commenced the season with 24 colonies; got 1350 lbs. box honey, and increased to 37, all packed in chaff. I have 1000 lbs. honey in 1½ lb. boxes to sell, put up in crates of 16 boxes each; outside boxes, glassed, remainder not glassed. Delivered on board the cars at Decatur, Van Buren Co., Mich., at 18 cts. per lb. S. H. MALLORY.
Decatur, Mich., Dec. 11, 1882.

I have about 1000 lbs. of white honey, and 500 lbs. dark honey, all extracted, for sale at 10 cts.
DR. A. B. MASON.
Wagon Works, Lucas Co., O., Jan. 20, 1883.

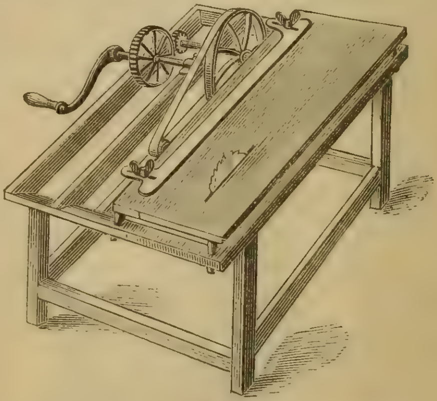
ADVERTISEMENT.
Every lady should send 25 cents to Strawbridge & Clothier, Philadelphia, and receive their *Fashion Quarterly* for 6 months. 1,000 illustrations and 4 pages new music each issue.

NOTES FROM THE BRIGHT-BAND APIARY.

FRIEND KINGSLEY'S ADVERTISEMENT, NO. 1.

I AM glad to say, the bees of the Bright-Band Apiary are all snugly packed away for winter, and have been doing well up to date; even some three-frame nuclei have stood weather down to zero. So much for my way of packing, which I shall be glad to give at some future time.

But now I wish to turn to the fraternity, with an expression of thanks for the kind patronage given me during the past summer, in queens and bees. I also think I can be of service to a great many of you this winter. There are two things a great many of us need, but are without, on account of the high price generally asked for them, and that is, a hand-power buzz-saw and extractor. By proper management I am able to make and furnish either at a much less sum than is generally asked. I will first give you a picture of the saw.



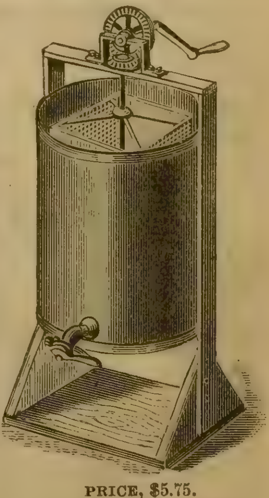
PRICE $25.00.

I am glad of having the privilege of bringing this saw before you all, as I have never seen any thing that would equal it, either in rapidity or quality of work. It is very handy, as one hand can do the turning and sawing too, and, at the same time, is not very hard work, unless you get into a "big" hurry. The whole thing is gotten up in first-class workmanlike style, and all you have to do when you get one is to put the crank on and go to sawing. Seven-inch saws will be used, unless some other size is ordered. All who have hives, queen-cages, section boxes, etc., to make should order one before spring.

And now for the extractor.

This is made very much on the style of Novices, only it is set in a light but strong wooden frame, which makes it convenient to set almost any kind of a vessel under to hold the honey, and about the right height to "save one's back." It also makes the gearing stronger.

Now, friends, both the saw and extractor are gotten up in first-class workmanlike style, and I shall take pride in trying to please all. Price of saw, $25.00. Price of extractor, any size not larger than for Langstroth frame, $5.75; for a larger size than this I shall probably have to charge a little more.



PRICE, $5.75.

Very truly yours, CHAS. KINGSLEY.
Greeneville, Greene Co., Tenn.

GLEANINGS
IN
BEE CULTURE.
DEVOTED TO BEES, HONEY & HOME INTERESTS.
F.A. Whiting

Vol. XI. FEB. 1, 1883. No. 2.

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.

Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

NO. 39.

A HOME-MADE WIND-MILL.

I GUESS I shall have to be a little more careful about telling what I am going to do,—yes, or even what I am *thinking* of doing. For instance, on page 478 of October GLEANINGS for 1882, I remarked that I was "thinking quite strongly of building a home-made wind-mill on top of my shop, with which to run my buzz-saw." Nov. 9th I received a letter from which I give the following extract:—

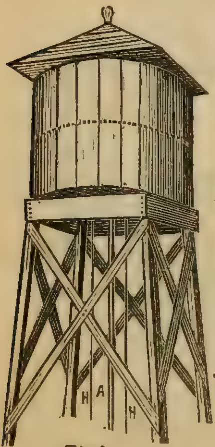
> "Well, friend H., how about that wind-mill? have you made it yet? and if not, are you going to? and when it is finished, will you give us a photograph and description of it in GLEANINGS? I am just about crazy to know all about it. I have a foot-power saw that does good accurate work, but it needs more power than I possess to run it. A patent wind-mill costs as much as a steam-engine, and that is more than I can afford at present. I wrote to A. I. Root to see if he could help me contrive a cheap mill. He wrote me that he could think of nothing cheaper than the patent mill; but we *must* and *will* have something cheaper. Please let me hear from you."

Now, neighbor P. has a home-made wind-mill that pumps the water, churns, and does sundry odd chores for him, and had I made a mill it would have been built upon the same plan as his. Soon after receiving the above letter it occurred to me that a drawing and description of my neighbor's home-made wind-mill might be valuable to some of the readers of GLEANINGS; therefore, as soon as I had leisure I took the sketching-camera under my arm and went over to neighbor P.'s. The whole family were interested in the sketching-camera, and then what a time neighbor P., his boys, and myself had in looking for a good position! You see, the mill was so high that it was impossible to get a good view without going so far away as to make the picture too small. We mounted the straw-stack, climbed upon top of the barn, on top of the wood-shed, and went inside the barn, climbed upon top of the hay-mow, and pointed the "machine" through the one or two knot-holes that we could reach. (I have always obtained the clearest pictures by placing the camera just inside the open door or window of an otherwise darkened room.) Finally, by building and climbing upon the top of a pyramid of boxes and barrels just inside the great barn-door, and sliding one of the doors partially open, a good position was obtained, a sketch of the wind-mill taken, and here it is.

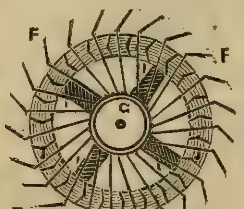
This style of mill might be illustrated by placing the fans of a fanning-mill in an upright position inside of a hogshead or large barrel, the staves of which are made to overlap each other, and to turn upon pivots at their ends, as do the slats of a window-blind. In the illustration given, the blinds are represented as open, and it will be seen that the wind can readily enter and strike the left side of the fan-wheel, while at the right the blinds stand in such a position that the wind is deflected or turned from its course, and passes to the right, around the outside of the mill. A is the vertical shaft to which are attached the fans, or sails. Although not so shown in the drawing, yet the corner posts of the tower extend to and support the roof.

Fig. 2 is a sectional view of the mill as it would appear if cut in two at the dotted line shown in Fig. 1.

B, B, are the blinds, or deflections. C, C, are the sails; and it will be seen that, the better to "catch" the wind, these sails are not straight, but curved. E is the shaft. Now let us suppose that the bottom, or floor, of the mill is removed, and that somebody is standing underneath the mill, looking up at it, what he sees looks about like Fig. 3.



Fic I



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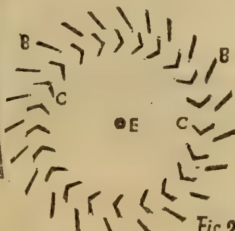


Fic 2

PLAN OF HOME-MADE WIND-MILL.

F, F, are the lower ends of the blinds, to the inner edges of which are attached, by means of staples, light iron rods, the inner ends of which are bent *down* so as to form right-angled hooks that drop into holes made near the circumference of the wheel G. As the blinds turn upon pivots at their ends, as do the slats in a window-blind, it will be readily seen that, by turning the wheel G, the blinds can be opened or closed at pleasure. Neighbor P. has a long rope, the ends of which are fastened to opposite sides of the wheel G; the rope then passes over pulleys and hangs down like a long rope swing. Pulling one side of the "swing" opens the blinds, while pulling upon the other side closes them. This rope can be seen at H, H, Fig. 1. Just above the wheel G, and the iron rods that connect it with the blinds, can be seen the spokes I, I, I, I, and rim J, J, of a wheel. At the top of the mill is another wheel exactly like this one, and it is between the rims of these two wheels that are placed, in an upright position, and nailed fast, the sails that receive the force of the wind. The rim of the wheel shown in the above illustration is represented as "transparent," which enables us to see the lower ends of the sails.

The lower ends of the blinds should not fit closely to the floor of the mill, but should be raised an inch or two, otherwise a sudden fall of temperature during a storm of rain or sleet will freeze them fast, making it impossible to open or close them. When a mill like this is used to drive machinery, and it is found necessary to do so, heavy ball-governors can be used, connecting them by means of levers with the wheel G. This kind of mill can be built by an ordinary mechanic; and there is but little liability of its being wrecked in a gale. The enormous head pressure, which causes a great amount of friction in all mills of the rosette pattern, is entirely avoided. It can be placed in the cupola of a barn, upon a shop, or upon a tower, as best suits the owner. The sails receive the *direct* force of the wind, and that, too, at the periphery of the wheel, thus obtaining the greatest possible leverage, while most of the weight of the material lies at the rim, consequently imparting great momentum to the machine while in motion.

Neighbor P. himself built his mill, and the tower upon which it stands. The material for their construction cost $15.00; that for the mill alone cost $6.00. His mill is 6 feet high and 6 feet in diameter, and, with a wind having a velocity of 20 miles an hour, is about ¾ horse-power. It is estimated that a mill 12 feet high and 14 feet in diameter would give 15 horse-power.

I am well aware that wind power is not the right power with which to run a factory,—it is too expensive waiting for the wind,—but bee-keepers who make hives for their own use only, and perhaps for a few of their bee-keeping neighbors, and who probably do their sawing by foot power, to such, I think, a good wind-mill would be a boon. They could have every thing in readiness, and when there came a windy day they could go into the shop and saw all day long. Then, besides, wind-mills can be made to furnish power for pumping water, sawing wood, cutting or grinding feed, turning grindstone, churning, etc. W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., Jan. 4, 1883.

I am sorry to throw cold water on your home-made wind-mill, friend H., but this is a subject I have been pretty familiar with, in my earlier years. The mill you describe is very simple, and easily made; and if it gives the power needed, all well and good. But there is one very great objection to all vertical wind-wheels such as the one you describe. I once invented one, and submitted it to the editors of the *Scientific American*. The objection they gave was, that the wind could act on only a few of the sails at one time, while, with the horizontal wheels in common use, the wind is exerting a power on every individual sail, or bucket, *all the time*. Therefore, to get the same amount of power with a vertical wheel, we must make a very much larger machine; and, ordinarily, it has been decided to be more expensive in the end. Wind will certainly do a large amount of work, and that, too, without engineer or fuel; and we did at one time run all our bee-hive machinery with a 17-foot wind-mill, and for a time we ran with it the printing-press that printed GLEANINGS, as well. When one does the work himself, I like a wind-mill; but with hired help, that must stand still if the wind doesn't blow, it doesn't answer so well.

CANDY FOR QUEEN-CAGES, AGAIN.

FRIEND HALL TELLS US HOW HE DOES IT.

I SEE some of the queen-breeders mention the waxing of the cage where the candy for the queen is to be put. Friend Root, we are the first to use this kind of a cage, so far as we have any knowledge. In the latter part of the summer of 1881 we first began to use wax where we put the water, and the past season we waxed every cage where the candy was put in the cage, and we shipped over 400 queens in 1882. You no doubt have examined our cage. We use light poplar wood for them, 2 inches wide, 1 inch thick. We bore one hole 1¼ in., then bore one ¾ of an inch. We nail a thin board on one side, and then pour hot wax into the ¾ hole, which prevents the wood from absorbing the moisture. We next bore one hole into the other end with a ⅝ bit, boring it into the edge, and just far enough to let the tip end of the bit come through. We pour hot wax into this hole, holding it there until the wood absorbs the hot wax, then pour the rest back into the melting-pan. We then pack some cotton trimmings of cloth into the last-named hole; pour in water until the trimmings are thoroughly wet; then dip the cork into hot wax, and cork it up.

We make an opening into the cage so the bees can get the water. We have had great success with this cage. I think that, when the candy is properly made, and out of granulated sugar, that almost any kind of cage will do. Granulated sugar has been the most satisfactory with us. Some of the queen-breeders say they haven't lost a single queen in the mails. That beats us. We lost several before we began to use granulated sugar. If we could get a cage that would carry every queen through all right to our customers, without the loss of a single queen, wouldn't we be fixed then? and we could sleep well at night, after caging queens all day and sending them out, knowing that every queen would go through safely. We shall cage our queens 24 hours before shipping them (or some of them at least), to see whether it makes any difference. They would be reduced in weight and size; they would not tumble about in the cage as much as they would to just cage them right out of the hive, heavy with eggs, and clumsy. The mail-bags are roughly handled. We have seen the mail agent on the cars throw them out on the ground, and it is very heavy. Such handling is enough to kill the poor little bees. We want a cage that will protect the queen, no matter how roughly they are handled.

We are going to try our hand on a cage the coming season, for long distances, and cage our queens 24 hours before shipment; will not cage them in our mailing-cages until ready to ship. There is no business that we delight in more than rearing queens and shipping them; and one of the greatest pleasures in it is to have a nice good queen to fill all orders as they come, by return mail; and it is a great pleasure to us to receive cards from our customers, saying the queen arrived all right and in good order, and in due time, and that they are well pleased with them, and give satisfaction in every respect.

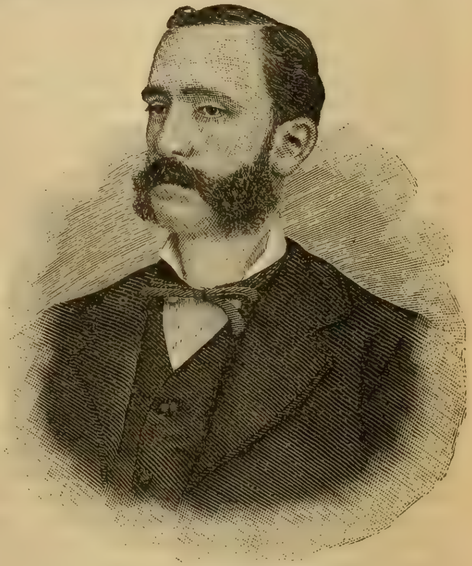
Kirby's Creek, Ala., Jan. 15, 1883. T. S. HALL.

I have just been puzzling over the way to fix the Good candy for our queen-cages next year. Very small glass bottles, with a large mouth, do very well; but we have much trouble in fixing them securely in the cage, because of the varying sizes we find in any thing made of glass. As wax is the natural receptacle for food for the bees, I presume a waxed hole will be as good as the bottle, and very likely cheaper; yet, for some reason or other, we have alwsys made slow work where we are obliged to use melted wax, to say nothing of the daubing pretty sure to happen, unless expensive help handles it. I don't like to have the honey soak into the wood, because it doesn't look tidy and nice, and I don't want the honey to be absorbed from the sugar, so as to leave it dry, either. We shall see.

THE WRITERS FOR GLEANINGS.

TAKING A LOOK AT THEIR FACES.

I HAVE for many years felt like having on the pages of GLEANINGS a view of some of those whom we learn to know so familiarly month by month, but I have been a little doubtful about getting engravings at a moderate price that I would want to use. We have recently found an engraver, however, who, I think, will do very well; and now, friends, I take pleasure in introducing to you, to commence with, our old and well-known friend



W. Z. HUTCHINSON.

He gave me his photograph at the convention, and also that of the twins. I haven't got the twins with him this time, but we are proposing to have them meet the little folks in our next JUVENILE, if our friend the engraver has good "luck" with them. You see, you would now all of you know friend H., if you should see him come in at a convention, even if anybody didn't say, "That is W. Z. H."

HOW SHALL WE GET OUR COMB HONEY STORED AND MARKETED WITH LEAST EXPENSE AND LABOR?

SOME ITEMS OF EXPERIENCE FROM OUR FRIEND BYRON WALKER.

FROM numerous articles in the different bee journals, it seems that the matter of packages for storing and marketing comb honey is attracting not a little attention just now. Having raised and marketed about 50,000 lbs. of honey, put up in a variety of ways, in the last half-dozen years, I venture to offer a few thoughts on this subject.

As the bulk of my honey crop is usually taken in a few short weeks, often late in the season, when most bee-keepers are busy preparing their honey for market, and their bees for winter, I find it very necessary, in handling my apiary of about 150 colonies, in order to accomplish all the labor involved in these several objects, so as to secure the best results, to adopt those methods and appliances that will enable me to perform the greatest amount of labor in the shortest space of time; a necessity rendered all the more imperative, where competent assistance is not to be had, and at a time when, to supply the urgent demands of one's customers, is to rob your own apiary of the necessary sections, cases, and foundation.

Again, as my experience teaches me that one of the great obstacles to a ready sale of comb honey is the bad condition in which it too often reaches the dealer, I must have packages of such size and strength as will best withstand rough handling. Then, too, as it is a troublesome and expensive item to keep track of and recover one's shipping-cases, especially where shipping to distant markets, I find it pays best, and gives the best satisfaction to all concerned, to make use of cases which you can afford to give away with your honey. It is hardly necessary to add, that I must use packages of such sizes as will meet with the most ready sale, and bring the best prices. Now, may I not venture to conclude, that a style of package that will combine and secure these several ends is the one most needed? It is not my intention, at the present time, to mention in detail the various arrangements in use for securing and marketing comb honey, but rather to speak briefly of that which has given me so much satisfaction for the past three years, and which I expect to make use of in the future. It consists chiefly of one-piece section boxes, somewhat similar to those made by yourself, used in connection with a combined honey-rack and shipping-case; also nearly the same as that described by you in your price list. I sent you a sample of my section last year; but as I have reason to suppose that you either did not see this at all, or else, noticing that the ends were not dovetailed, you failed to examine it closely, I take the liberty to point out in what respects it differs from yours, and wherein I think it superior.

As I found by experiment what common sense teaches in theory, that timber that can be relied upon to bend at the *corners* of these sections without breaking is not dry enough to dovetail at the ends without shrinking, I avoid the use of timber that has been seasoned too much; make my section a trifle heavier than yours—5-32 inch instead of ⅛ in thickness; cut the grooves for the corners in such a way that the section will bend at the right points every time, without coaxing or compulsion, and join the ends with ¾ No. 19 wire nails, instead of dovetailing. In this way I secure a section at least twice as strong, and one just as quickly put together as yours; for although it takes a little longer to nail them (I find, however, plenty of handy boys ready to do the work at 5 cts. per 100), a smart boy, with the aid of a simple steam-box, can bend mine at the rate of 50 per minute, while any one whose thoughts are busy in another direction can bend them several times as fast as yours can be bent by a skillful hand attending strictly to business. Allow me, in this connection, to refer you to the inclosed opinions of Oliver Foster, Mt. Vernon, Ia., and J. A. Green, Dayton, Ill, which I think you will admit are entitled to some weight.

I am happy to say, that your one-piece sections are decidedly the *best* of all I have seen. Your groove, with one side deeper than the other, is a wonderful improvement. A boy whom I *could not teach* to fold the "Root" section right, folded yours every one right from the start with scarcely any showing. OLIVER FOSTER.
Mt. Vernon, Ia., Dec. 22, 1882.

Mr. Walker:—Your card of Jan. 4th is received. You ask for an opinion as to your sections. I will say, that during the past season I used over 6000 sections, of three different makes, and much prefer yours. You may send me 5000 sections now, and I shall probably want more later. J. A. GREEN.
Dayton, Ill., Jan. 8, 1883.

It is not that I have an eye to that inevitable five dollars, that I call your attention to this matter, for I could well afford, in the long run, to pay you ten times that amount, would you agree not to copy this improvement. Indeed, it requires no prophetic eye to foresee the early adoption of this style of corner by all manufacturers of one-piece sections; and the sooner this takes place, the better for the brotherhood of bee-keepers. I have said my combined honey-rack and shipping-case was similar to that advertised by you, differing chiefly in having the ends of an equal thickness throughout, and provided with a wide groove cut entirely across them for handles. Such cases can be used in the upper story of L. hives, by making the ends of cases only ⅝ in. thick.

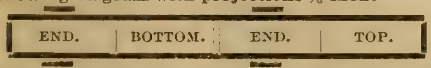
It is a matter of not a little astonishment to me, that you have so few favorable reports to publish, from those using such cases without separators. Several correspondents seem to think their experiments prove that straight combs can not be secured without separators, and you appear to be so far wedded to the arrangement of wide frames with separators, that you seem to think it would be almost a calamity for the bee-keepers of our land to be obliged to lay them aside for something else; but I would say for one, that I could not be persuaded to return to their use, believing, as I do, that it was a matter of pure economy to throw them aside. As to the matter of securing straight combs without separators, I can say that, with me, at least, it is no longer a problem, having only found it necessary to use large starters in my sections, and a section not over 1¾ inches wide. Out of over 10,000 lbs. of comb honey taken in about six weeks' time the past season, only a small number of combs were irregular, and these were chiefly in cases where wide sections were used. Had I been obliged to rely upon wide frames and separators to have taken my crop with during this time, with the help I could command from a couple of boys in preparing every thing for the purpose during the rush of the season, with orders for sections, etc., pouring in upon one, I imagine I should have had a much smaller yield to report (I took in all from about 100 colonies, 10,500 lbs. of comb honey, and about 3000 lbs. extracted, with an increase of 50 colonies), and by the time I could have prepared it for market it would have been worth several cents less per pound, and the preparation of my bees for winter would have been neglected.

You state, in your price list, that honey put up in such shipping-cases as I have described, usually brings several cents less per pound than that taken with separators, and packed in ordinary shipping-cases. Even if that were the case, I should much prefer to use them; but I find that my honey sells in the Detroit market as readily, and at as high a price, as that put up by some of my neighbors the other way. It does very well to handle over your honey several times, if you use firmly nailed sections, have plenty of time to waste, very, very careful hands, and a market you can reach readily with a spring wagon; but if you can't compass these conditions, and have to ship your honey to some distant market by rail, as I did to Chicago, two years ago, and to Buffalo, in part, the past season, you will find that the less you handle your honey, and the stronger the section you use, the happier will be the result of your venture, other things being equal; and you will be more fortunate than I have been if your honey in dovetailed sections, and especially that repacked in any way, does not bring you several cents *less* per pound, rather than *more* than the other. True, the glasses of these cases are sometimes soiled with propolis, and the sections more or less firmly fastened to each other and to the case by the same substance; but it is only a trifling matter to exchange such glasses for others in the one case, while it is just what is need to help withstand shocks from any cause during transportation, in the other.

To give an idea of what honey will stand when put up as I have described, I will relate an incident. This fall, while loading a lot of honey into a car, I had about a dozen 20-lb. cases of 1-lb. sections on a cart, piled about three feet high, when an assistant carelessly lifted a couple of them off from the wrong end of the load, causing the rest to be dashed to the floor with great force. Upon examining the wreck I found only two cases that were materially injured, a third having one section broken. Comment is unnecessary. There are other advantages to be gained by the use of this case that I have only time to hint at in this already too long article, such as facility in tearing up, and in excluding the queen from the sections, by properly spacing the bottom slats of the cases, also in starting the bees at work in the sections by fastening the starters to the *ends* of the sections instead of the *tops*, and standing the cases on end between the outside combs of the brood-nest; after which they can be readily raised to the top for completion. This latter plan works best where frames having closed ends are used, and the *length or breadth* of your case is equal to the depth of your frame.

With regard to different sizes of sections, while various sizes will be necessary to suit all classes of customers, the 1-lb. package is too popular at present to be easily superseded by any other size.

I would suggest, however, that where pound and half-pound sections are to be used in connection with these cases, without separators, it would be best to have them made after the style shown in the following diagram with projections ⅛ inch:—



The idea is from Chas. Bellows, Vermillion, D. T. You will notice, this does away with the projections objected to by Mr. Heddon, and allows the bees to pass freely from one section to another the whole length of the case, and it may help to secure straight combs where the sections are not filled with fdn. Besides, would we not avoid using the only feature of Forncrook's section on which he stands any chance of sustaining a patent? I can see no objection to this plan, and shall give it a trial, at any rate. It may be better to use two projections instead of one on both edges of each end.

Capac, Mich., Jan. 23, 1883. BYRON WALKER.

Friend W., I did get your one-piece section, and noted your improvement, although I did not quite take in the idea that your section could be doubled up just as quickly as those with the V-shaped groove. We did not adopt your section, because we had quite a number of complaints from them; and among them was the very friend, Green, who now gives the above testimonial. Another thing: If we should stop our works, and alter our machinery to meet the views of every brother who writes us and sends samples, we should never fill orders at all, nor do much else. Thank you for calling attention to the matter, even though you do it a little vehemently. Had you been at the convention at Kalamazoo, I think you would have heard me call attention to the fact that an immense trade was springing up in this combined crate and case, used without separators. Now, friend W., please send me one of those cases, arranged for the narrow sections you mention, and we will have it engraved for our next issue; also please answer the following questions in regard to its use:—

1. Do you tier these cases up, one above another? If so, how do you manage it so the bees do not soil any part of the section with propolis?

2. Do you put sections at the sides of the brood-combs in any other way than the one you have mentioned?

3. Do you let the bees work in each case until it is filled and capped in every section? and do you raise up one partly finished and put an empty one under it?

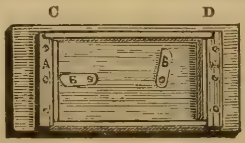
4. Can you space the wooden bars on the bottom of the crate so accurately that it will answer as a perforated zinc queen-excluder? If so, give a little of the details.

If I am correct, you do not quote quite fairly from our price list. The objection to a section made as in your diagram is the amount of room afforded the bees for propolizing the edges. I am informed by competent authority, that our friend Forncrook has no chance for a valid patent on any point, and never had.

DEVICE FOR MAKING "HOME-MADE" FRAMES.

BY REQUEST OF ONE OF OUR JUVENILES.

At the request of my little girl I make a picture below of the apparatus I use for nailing frames together. Of course, this would be of no use to those who use dovetailed frames, such as you sell, but I think a large majority of bee-keepers still use frames nailed together, and nearly all of my bee-keeping neighbors, who are not mechanics, make very awkward work nailing frames together without such a help. The apparatus is merely a piece of board with two cleats, marked A, A, screwed fast to it, just as far apart as the outside width of frame. Of course, the width of board and the length of cleats should correspond with the depth of the frame; the top ends of the cleats should be notched as shown, so that the distance from C to D would be equal to the length of the top-bar; the object of



these notches is, that the projecting arms to support the frame may be made equal in length on each side, without stopping to measure it, The buttons marked B, one in place and the other turned up, are to hold the end-bars in place while nailing, and are fastened to the board with one screw.

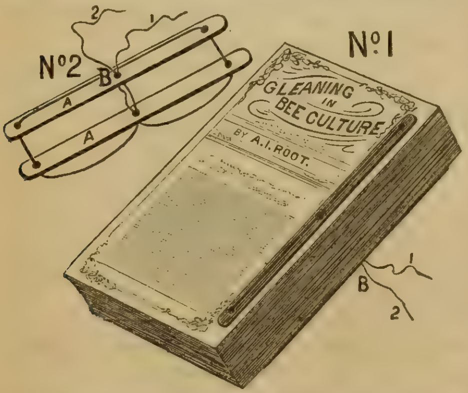
I used to nail my frames together without any such help; but since I have used this I find I can nail them twice as fast; and another advantage is, that they are perfectly square, and are not winding, as they frequently used to be. It took me about twenty minutes to make the "concern," and I saved more than that time on the first hundred frames I put together. E. HUNT.

Sheridan, Mich., Jan. 8, 1883.

HOME-MADE BINDERS FOR GLEANINGS OR OTHER JOURNALS.

ANOTHER PLAN SUGGESTED BY ONE OF OUR BEE FRIENDS.

IN last Jan. No. I read a description of how to preserve GLEANINGS, by T. J. Cook. The illustration shows how I preserve all my periodicals. A, A, are leather straps, two inches shorter than the papers I wish to bind, and one inch wide. Punch 3 holes at equal distances in the strap, large enough to pass a shoe-string through; punch corresponding holes of same size through each number of the paper, Dec. No. first, next Nov., etc., until January is on top; then place one strap on top, the other at the bottom, then run the shoe-lace (a stout one) as indicated above, No. 2; draw them tight, then tie them at B, and the work is done. If care is taken to have each hole correspond with the succeeding one in the several numbers, you will have a pretty neat job of it that you need not be ashamed of. I got the idea some years ago from the *Poultry World*, for I love bees and thorough-bred poultry.



JOHN W. STURWOLD.

Haymond, Ind., Jan. 10, 1883.

Thanks, friend S. Perhaps I am mistaken, but it has seemed to me that leather would be rather too yielding, to draw the numbers up strong and tight. Would not stiff pasteboard under leather be better? And while I think of it, why not have a pasteboard cover for each side? We all have had experience with books with paper covers, and know how easily they get torn and "dog's-eared." I have been thinking of late, several times, that I almost never wanted to see another paper-covered book of any kind that was of any value. For a while we were out of paper A B C books, and, to avoid delays, sent cloth, and asked the difference, if satisfactory. Almost every one expressed himself pleased to pay the difference and have a nice strong covered book. Well, we have a few times tried sending paper-covered books when we were out of the cloth. Whew! you ought to have seen how the brethren scolded. We had to have the most of them sent back. Well, to go back to the home-made binder, if you have some sheets of pasteboard cut nicely square, you can cover them with some nice colored paper, blue or green, for instance, and then paste a white sheet on the inside, and the front cover to GLEANINGS on the outside, then use the binding arrangement above, and you have a book that your grandchildren can pull down from the shelf to look at the pictures, and note the progress in bee culture, years hence, if you choose. One of our girls binds our Postal Guides in a similar way, and they make very pretty-looking books. Our engraver has made a funny blunder and got the binder on the *front* edge instead of the *back*.

"Remindery,"

Or Department for duties to be attended to this month.

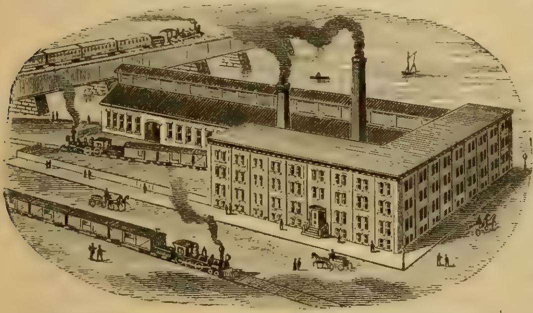
SUGGESTIONS FOR FEBRUARY.

WITH many of us the bees are likely to have a fly this month, where kept out of doors. Where kept in doors, I would not disturb them, unless things are in a very bad state indeed. Darkness, and plenty of good pure air, will usually keep them quiet, although some folks do contend they should have water. If giving them water keeps them quiet, perhaps it will be well to give it to them quietly. Go slow in adopting new ways of doing. I think I would rather have bees kept in the cellar until natural pollen comes, if they are not suffering with dysentery, or are too warm and uneasy. Bees out of doors may be handled whenever it is warm enough for them to fly, but I would not handle them unless it is warm enough. If they are properly protected and ventilated, and good food is all around them, they can fly when they get ready, or not fly, as they choose; and I do not know what need there is of disturbing them, unless it is to see that the entrances are not choked with dead bees. If the entrance to the chaff hive is left open all winter, as I think it should be, there will be little danger of its getting stopped up; but if any hive should not fly when the rest do, it might be well to take a peep into the entrance. If the severe weather has killed off any colonies, either fasten the hive up securely, or put the combs in a tight honey-house, where no bees can get started robbing on them. Robbing, started in the early spring and winter, is a very bad thing, and be sure you have none of it.

A FEW WORDS ABOUT SOME SUCCESSFUL BUSINESS MEN.

W. F. & JOHN BARNES, ROCKFORD, ILL.

SOME of our older readers may remember the experiments we made with foot-power saws for making hives and section boxes, something like ten years ago. You will remember that I decided in favor of a machine costing only $35.00, in preference to one that cost over a hundred. The cheap machine was made by the gentlemen whose names appear at head of this article. We have sold machines of their make, every year since then, and it has been with pleasure that I have noticed the steady increase of their business from year to year. At the Centennial I was pleased to meet one of the brothers, and shall always remember him as a bright, good-natured enthusiast in his business of showing and explaining what could be done with foot-power saws. Below we give an engraving of their factory as it appears in this present year of 1883.



The material used in this building is brick and stone. The main machine-shop, shown on the extreme right, is 150 ft. by 40; the front portion of the L is also 150 ft. by 40. The office in the left end of the front L, where two men are seen, is 40 by 50. The rear part of the building, facing the Rock River, is the foundry and smith shop, 250 ft. by 60.

A COUPLE OF A B C SCHOLARS IN KANSAS.

THEIR TRIALS AND SUCCESSES.

MY wife and I are bee-keepers on a small scale. I commenced last June with two colonies of Italian bees. They were about as nearly starved out, I presume, as bees ever are to pull through all right. I thought I knew a little something about the science of bee-keeping, but I soon found out I was as green as grass; and the more I worked with my pets the more mystified I became, and at the same time interested. I finally subscribed for GLEANINGS, and that made the fever worse. I bought Cook's Manual and your A B C book, and of course I learned a great deal; but it seems to me the half has not been told, and that there are "mountains" of information yet for me to learn. I feel now, when I do not think of it, greener than I did the first of last June, when I had no experience, nor your A B C book, Cook's Manual, or GLEANINGS for a guide. I had fertile workers during the season, and robbing, and the "contrariest" and most aggravating swarm of bees, I thought, on earth. It was an after-swarm that would swarm out, and then go back into the old hive. They kept up this foolishness once or twice a day for five days; and after they had eaten all of their honey in the old hive, they got disgusted, as I then thought, and concluded to stay in a hive I had been putting them in, and went to work. They were the best workers I had in my little apiary, afterward working all day until dark, with a rush.

In the midst of a honey-flow the 10th of Sept., three days of dry hot winds dried up all the flowers, and the honey season was ended, and robbing was in order. The colonies were all strong, except one. This the other bees attempted to rob. I was a little better posted by this time. I tried all of your plans and Prof. Cook's, without success, except the last. I moved the hive two miles into the country, and it was a success. I brought them back a fair colony late in the fall, and put it in the cellar. I call it my nucleus. I have at present 5 strong colonies and the nucleus; one colony in chaff hive, 2 packed in chaff in Simplicity hives, and on their summer stands; the rest I put in the cellar. My five colonies went into winter quarters with about 40 lbs. of honey to the hive. I got something over 200 lbs. of comb honey, without fdn. One colony made 105 lbs. surplus, and all in a country that does not furnish honey, as friend Dearbon, of Silver Lake, Kan., said in the last June No. of GLEANINGS. Silver Lake is only six miles from here, and a good deal such a locality as this. Perhaps he may be right, as one season would not disprove it.

SMARTWEED.

Or a weed that looks like the old-fashioned smartweed, grows thickly everywhere in cornfields and on wheat-stubble that has not been plowed up. It furnished the honey here, and is of a very superior quality. Some speak of it as being equal to white clover. Will some one in GLEANINGS tell whether it can be depended upon as a honey-plant? Does it afford honey every year, and how long is its season to yield honey? I couldn't find any thing in any of the bee literature as to its value as a honey-plant.

My wife helped me with the bees. She has the bee fever also, and caught it from her husband. Often in her sleep, during the time when the bees were swarming out last summer, she would wake me up in the night and say the bees were all over the bed, clawing around and brushing imaginary bees off the pillow until she would wake herself up. She is reading and posting herself up this winter, and says she will allow no such foolishness and cutting-up and swarming-out so often next season as we had last. I call her "Mrs. Harrison," as she admires that lady's letter in GLEANINGS so much; and, by the way, she thinks GLEANINGS is just splendid, and so do I. We have no little ones, only our bees for pets. The thermometer has averaged 17 degrees below zero for the past three days — the coldest known for years in Kansas. M. F. TATMAN.

Rossville, Kans., Jan. 22, 1883.

I am very glad to know you succeeded so well, my friend; for over 100 lbs. of comb honey to the hive might encourage almost anybody, for the first season. I wonder if other bee-men's wives, a few of them, have not dreamed of bees, and made things lively for awhile.—The plant you speak of is called by some heart's-ease, and by others blackheart. Its botanical name is *Polygonum persicaria.* As it always comes into weedy corn-fields in the West, I presume there is little need of cultivating it as a honey-plant.

THAT FLOWERING MAPLE.

HOW TO PROPAGATE IT BY CUTTINGS.

ON page 31, Jan. No., E. Edmunson writes about the abutilon yielding honey. I have known for several years that there are two or three species of them that are secreters of honey of fair flavor, but I never owned any of them myself. You also asked if some of the "sisters or other womens" won't tell how to propagate them by slips. Well, I am no "sister," nor "other womens'" *sister;* but "I iz a man that noze how 'tis dun, so I'll tell you awl."

A number of years ago I worked with an expert gardener in a large greenhouse, and there learned the principles of the art of propagating plants in various ways. But not having a propagating-house of my own, I have many times used its substitutes, one of which I will try to make plain.

Take a deep goblet, tumbler, or a fruit-jar, or a bottle with the top broken off. Put some good-sized pebbles, pieces of coal clinkers, or any thing else in the bottom, to fill the article within 3 inches of the top. Now put some smaller ones in to chink up the cracks in the top of the pile, so that there will be nothing but small crevices left, and yet all beneath this top layer needs to be kept just as open as possible, to make a space for water.

Now take some good rich garden soil (not chip dirt), and the same bulk of sand, — I like river or clean road sand best, — and fill up the rest of the glass with the mixture. Be sure to mix the sand and dirt thoroughly. Wet it till the water runs through and nearly fills the spaces full among the rubbish in the bottom of the glass. If your job is properly done, very little if any of your soil will wash between the pebbles.

You are now ready for the cuttings. They should be the young tender shoots at the tips of the branches, from two to four inches long. Stick these *tight to the glass*, and as close together as you have a mind to, all around the glass; then set the glass close to the window, in the full blaze of the sun, only watering often enough to keep some water in the bottom of the glass. Don't be afraid the things will die, if they do wilt some; nor if the soil looks dry on top, think they must be watered; but just make up your mind that, as long as you see water in the bottom of the glass, the water must evaporate through the soil. If your cuttings are good, and it has been pleasant weather, in 10 or 15 days you will see the roots start. When they are an inch or two long, make the soil quite wet; then carefully pull out the best-rooted ones and put them into small pots in good garden soil, and give a good watering. Set in the shade for two or three days, then give them a strong light. Small pots, or even spice-boxes, are good; but to put one of these young plants into a large pot or box is like feeding an infant with food needed by a strong hard-working man, and it would do as well. I have put nine cuttings in a goblet that had the bottom broken off, so I hung it by three strings to a nail in the top of a window-case. Foliage-plant cuttings, with only two leaves, being a single joint of young growth, have rooted in one week for me by this treatment, and I have taken three batches of plants from a glass, all well rooted, within five weeks.

In 1882 I had a piece of a choice foliage plant 10 in. long, with four pairs of leaves and two small leaves. I cut off each of the three pairs of large leaves to make a cutting; thus I had four good cuttings. The two pairs of oldest leaves were split in the center of the stalk, leaving a leaf and perfect bud on each piece, with about 1½ inches of split stalk below each leaf. I then had six good cuttings. All of them lived, and in two weeks were all rooted and in separate pots. This was done the last week in March, and furnished me six good plants for the border, that surpassed any of the ten-cent plants from the florist.

Verbenas, heliotropes, petunias, and all of the bedding plants, as well as many of the choice greenhouse plants, are easily raised in this way. I have tried the plan for twelve years, and know it's good.

Woodbury, Ct., Jan. 19, 1883. H. L. JEFFREY.

DON'T SELL YOUR HONEY WITHOUT KNOWING WHAT IT IS WORTH.

MRS. HARRISON TELLS US SOME OF HER TROUBLES.

BEE-KEEPERS tread on my corns oftener in the way they dispose of their honey than in any other. Dealers say that they never saw honey so plentiful in Peoria before as during the last State fair. We do not wish our fellow-craftsmen to think that we claim a "patent right" on this market, for all have the privilege of selling where they can do the best. The *hurt* is not in coming here to dispose of their honey, but in forcing it upon the market at a price less than the cost of production. A groceryman remarked to us yesterday, "If these men who brought their honey here during the fair had worked up their own locality, they would have realized much more money. But they would say, "I have the honey here, and I must sell it; I don't want to take it home; name your price."

It takes some time for people to be willing to pay a fair price for an article after they have purchased it so cheaply. This cheap honey, though, has its mission: it will create a demand where it never existed before, as many persons bought it who would not have done so, if it had not been cheap. And they learned what they probably never knew, that honey "is good." These bee-keepers (in a small way, no large ones are ever guilty of such folly) paid dearly for thus educating the people.

There are few country neighborhoods where the product of fifty colonies of bees could not be sold to advantage. We once visited a bee-keeper who lived five miles from any town, who had an apiary of about 50 colonies, well cared for, and run exclusively for extracted honey. He said, "I sell all my honey at home, to the neighboring farmers, and I could sell much more if I had it, but I could not nearly supply the demand."

The products of large established apiaries find no difficulty in finding a market; but that of small apiaries is different. The market must be worked up. The best way to sell in towns or large cities is to leave the honey at home and canvass with samples, visiting drug-stores, groceries, etc. If the owner has not any work that will pay him any better, large orders might be taken by visiting manufactories where many hands are employed, choosing their lunch-hour as the most propitious time for the visit. We have found some very good honey customers, while purchasing our household supplies, by offering a small quantity of honey, and paying the rest in money. MRS. L. HARRISON.

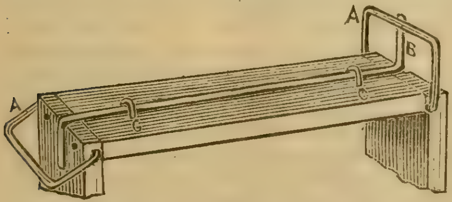
Peoria, Ill., Jan., 1883.

It is bad to sell honey, or any thing else, for what it will bring, to folks who do not particularly want it. On this account I would dislike to take a load anywhere unless I had some sort of an idea how I was to dispose of it. Your suggestion, Mrs. H., that it were well to go first with samples, is an excellent one, unless you are prepared to take the load home again, unless a fair price be obtained. If our friends will always mention what their honey sells for, in making their reports, it will do much toward informing all who read the journal about how much they ought to ask for their honey.

REVERSIBLE FRAMES, AGAIN.

FRIEND BURGESS, AND HIS IMPROVEMENTS OF THE PAST YEAR. SEE P. 71, FEB., 1882.

ABOUT a year ago I sent you a sample of my way of making the "reversible frame." You suggested two bearings instead of one. I accepted your idea, and now inclose a *shortened* end of the frame, as I make it. You will notice that my end-pieces go between the top and bottom bars so the wires hold all tight together. Your illustration was the reverse. In wiring for fdn. I use 6 wires across my frame — the end ones, one inch from the end-piece — you will notice the holes made. As I turn the frame over from time to time I need no *diagonal* wires. The wire bearings are made by winding around a ⅜-inch bar of iron, and then cutting them open on one side. The top and bottom bars have a saw-kerf near the end to receive them. The upright wire support is held in place by two staples, such as are used in blind-making, placing them 1½ inches from each end. I think a good many would try a few *reversible* frames, if you kept them in stock.



Recently a man wrote me, that, by turning over the frames of a Simplicity hive, as you suggested, he secured 18 boxes of honey where the bees had determined to put it into the brood-frames. They do not like to have the honey part of the frame put at the bottom. F. W. BURGESS.

Huntington, L. I., N. Y., Jan. 12, 1883.

When our friend sent the model of his reversible frame a year ago, I told him it would not do to let the frame hang on a single wire. You will notice in the one shown above, he has very ingeniously, indeed, so arranged it as to have a firm double support like our metal corner, and at the same time it permits the frame to be turned over at pleasure. While I think it quite possible that we may get a great deal more of the honey put into sections by this reversing, it still seems to me the best way to do it will be to have a hive with a movable bottom like the Simplicity, and turn it all over, placing the sections over the bottom-bars instead of the top-bars.

THE MAN WHO DIDN'T WANT ANY "BEE PAPER."

ALSO A GOOD WORD FOR THE CONTROLLABLE HIVE.

I SEND you the following account of an interview I had with a bee-man who uses Mrs. L. Cotton's hive. I was in a neighboring town the other day, when he was pointed out to me as a bee-man, and I accosted him with "Hello, friend, they tell me you are a bee-man."

"Y-a-a-s, I keep bees."

"Well, I suppose you take a bee journal, do you not?"

"A *what?*"

"Why, a bee paper."

"No: I never take no bee papers, an' I don't want any."

"But, you have books on bee-keeping, have you not?"

"No: I never could learn nothin' from books and papers."

"But, didn't you attend the meeting of our County Bee Association?"

"Y-a-a-s, I was up there, but I didn't learn nothin'. I could 'a' told more in one-quarter the time than them fellers did."

"Why, you must be an old hand at it, aren't you?"

"Y-a-a-s, I've kep' bees 'bout 20 years, I guess, but didn't handle 'em much till 3 or 4 years ago."

"How was that?"

"Why, ye see I began makin' a different kind of hive then, and I seen some men handle bees, and I learnt so I kin handle bees just as good as anybody kin, now."

"What kind of a hive do you call it?"

"Well, I call it the con-*trol*-lable hive, and I tell you it's the best hive there is made."

"Oh! ah! something new, isn't it?"

"Well, I guess there are none abeout here."

"It was not got up about here, then?"

"No: I sent off for it."

"Who is the inventor?"

"Her name is Lizzie Cotton."

"I suppose you have good success with her hive?"

"Yes, *sir.*"

"How much is the highest you ever got from one swarm?"

"I got 135 pounds."

"Well, that isn't to be sneezed at, any way. How did your bees do this year?"

"Pretty poor. I guess I had 400 or 500 lbs., however."

"How many colonies had you?"

"How many *what?*"

"How many hives of bees?"

"'Bout 25, I guess; but it's been an awful bad season. Wouldn't have got much if it hadn't been for feeding in the spring; and I tell you, I've got the best feeder you ever seen."

"Is that so? guess I'll have to come around and see it. Who got it up?"

"Got it up myself, and it beats any thing in the united world!"

At this juncture I had to tear myself away from this enthusiastic inventor, as I had other business on hand than the pursuit of bee lore.

Oberlin, O., Jan. 22, 1883. CHALON FOWLS.

HALF-POUND SECTIONS.

FRIEND MORRIS' EXPERIMENT, AND WHAT HIS WIFE "POLLY" THINKS ABOUT IT.

AS the ½-lb. section (like Mrs. Langtry) is all the talk now, I will give my little experience. Last August one day, says I to my wife, "Polly, I've thought of something. If I cut a 4¼x4¼-lb. section through the center, putting fdn. in each half, wouldn't the bees make half-pounds of honey?"

"Well, perhaps," says Polly; "but, what is the object?"

"Why, don't you see?" I said; "something new."

Like all other *inventors*, I never thought for a moment that some one else had thought of and put into practice, long ago, the same idea.

"Well," says Polly, "what's the use on't? You can sell all the honey you can possibly raise in 1-lb. sections at a big price now."

"But, Polly," says I, "I can get a bigger price per lb. for my honey."

"But, don't you see," says Polly, "you would have to get nearly twice as much for your half-pounds, to get your pay for your extra work and expense, double the amount of sections at nearly the same cost per 1000, double the amount of work in putting together and putting on and taking off the ½-lb. section? and besides, you are only catering to a morbid taste of a dissatisfied people who are always clamoring for something new. You men are as bad as we women. You want to change the fashion as often as we do. A 1-lb. section has been the fashion for a year or so, and now you must have a change, just as you have every thing cut to fit. A round section has been proposed and made, beautiful to look at too; now a ½-lb. section is the rage. Next you will want a section cut bias, with two rows of buttons up the back. And then, again, it would double the amount of fdn., and beeswax is getting scarcer. Comb fdn. is crawling up higher and higher in price, and you must study how to economize its use, instead of how to use more of it."

"Nevertheless, Polly," says I, "I am going to try one colony."

So I took 11 strong brood-frames and split in two 44 4¼x4¼ sections; of course, each frame held 8 of the ½-lb. sections, making 88 sections. Then filling each with nice large starters I hung them over a strong colony, fixed the hive perfectly level, and "let 'em went." They were filled and capped over nicely; but to ship, they are no go. They weigh a little over ½-lb., and are bulged just enough so that they can not be crated, and they do not stand well. Half-pound sections will have to be made wide enough to hold the honey inside the section. But I think I shall take Polly's advice, and stick to 1-lb. sections for a while yet.

By the way, as the question of separators or no separators is up, I will remark that I have found that, if I take *perfect* fdn., put it *exactly* in the *center* of the section, and a full-sized starter; put all the sections on the hive at once, have the hive *perfectly level*, and then don't meddle until the bees have finished the job, my word for it, 95% of sections treated that way will crate nicely, and will overrun 5 to 10 lbs. on a hundred, while with separators they will fall short. But there is no use of a bee-keeper trying to get along without separators, unless he is as exact as a watchmaker; and he must beat the Waterbury chaps at that.

TAKING BEES TO FLORIDA TO WINTER.

I think we Northern bee-keepers shall have to try the following plan, which I clipped from the Chicago *Inter-Ocean:—*

> On Saturday a car containing a curious freight was switched on the East Tennessee and Virginia Railroad and moved South.
>
> It was filled with bee-hives. One hundred and forty of the latest style of bee-hives piled systematically on top of each other, and to the foreground a philosopher with his bed and board.
>
> "Where are you going to take your bees?"
>
> "To Florida for the winter. My name is Thomas McFarland Jackson, and I live in Northern Missouri. I have large apiaries that are forced to lie idle in the winter. I'm going to take this carload of hives to Florida, where they can make honey every day in the year. As soon as the clover is out again in Northern Missouri I will take them back there."
>
> "Will it pay you to move them?"
>
> "I think so. It costs less than a dollar a hive for transportation, and each hive will have from $6 to $7 worth of honey in it when I bring it back. That is what Italian bees I sent to Florida last year did last winter. Only Italian bees will thrive in Florida, as the moths eat up the common bees."
>
> "Will you live in the open air there?"
>
> "I'm going to camp around with my bees. I believe I will bring back about $1000 worth of honey in hives that would otherwise lie idle all the winter, and be empty in the spring."

Rantoul, Ill., Jan. 24, 1883. H. M. MORRIS.

Friend Morris, we are very much obliged for the results of your experiment, as well as for the wise counsels of your good wife Polly. Thanks, also, for a report of that Florida project. We must try to follow up friend Jackson, and get him to tell us about how he succeeds.—Now about your ½-lb. sections: While reading your account I was hoping all the way through to hear that you tried a 1-lb. section, without splitting it in two; *i. e.*, that you by means of two sheets of fdn. made them build two combs in one section. The idea is not mine, for I remembered it from the card below. See: —

I feel moved to "put in my lip" about the half-pound sections. Make 'em just like the pound section, only run a groove the whole length of the strip, on the back side. When folded, put in *two sheets of fdn.* Harvest, crate, and market without dividing; but let the grocer's clerk pull 'em in two when he retails 'em. The halves, when parted, will not be quite half-pounds; but city folks are so stingy they like 'em the better for that. Won't be shouting for a half-*ounce* section so soon, eh?

Richards, O., Jan. 5, 1883. E. E. HASTY.

Well this looks to me the most promising of any idea we have yet had. No separators are needed between the two, for they are never taken apart until they are sold, and so we have a great gain here. Another thing: Those who have 1-lb. sections on hand can make them into ½ lbs. by simply running them over a fine slitting saw that will cut so nearly through they may be easily separated with a penknife after they are filled. I should think these slits could be sawed for about a dollar a thousand. Now, why will not this answer, for the present season at least? Has any one ever had two nice combs of honey in one section?

NORTH-EASTERN BEE-KEEPERS' CONVENTION.

A REPORT OF IT BY D. A. JONES, "HIS OWN SELF."

WELL, brother Root, you missed a great treat in not being at the North-Eastern Convention at Syracuse, on the 9th, 10th, and 11th insts. They are a lot of jolly, good fellows, brim full of apiculture, not married to any old-fogy notions, but bound to advance and keep pace with the times. I calculate that it was worth three times the cost of the journey to me, just to sit and listen to the "big guns" of New York State, who had come there to "Doo-little" but talk bee-keeping, and "Root" up every new idea, so that you could see it plainly before you; and as they had a "House" for a secretary, you will be sure to see it all in print.

Your humble servant was called on to explain and illustrate the best mode of putting up extracted honey in order to increase its sale and consumption; and so, securing a small tin pail of beautiful basswood honey, taken there on exhibition by Mr. L. C. Root, of Mohawk, N. Y., and, not having a spoon, I dipped it out as rapidly as possible with my knife, and was illustrating the best plan for putting up the honey to my entire satisfaction, when brother Root, seeing the manner in which his honey was so rapidly disappearing, admitted the value of my system, as did all the rest of the brothers present, feeling assured as they did that any quantity might be so disposed of.

I suppose that you will have the pleasure of their acquaintance next fall at Toronto, as the convention accepted my invitation to be there, and meet with the members of the North American B. K. A. They passed a resolution to be present as a body, and to bring their wives and daughters with them.

The half-pound sections were very severely criticised, and there seems little desire to adopt them, excepting as a curiosity.

I judge, from the intelligent discussion on wintering, that the majority of the members of the association have the matter well in hand, and that little loss may be expected from that quarter.

You may expect a very large trade in those new honey-packages the coming season, as nearly every one who produces extracted honey is beginning to see the advantage of putting it up in standard packages, nicely labeled, and each label bearing on its face the name of the producer; of establishing a home market, and realizing at least one-half more. The small-sized packages are serving excellently as introducers, and are increasing in sale tenfold.

Perforated metal will be much sought after during the coming season; and as yourself and brother Muth, of Cincinnati, O., are the only ones holding large stocks in the U. S., you may expect a lively trade.

I have almost "Given" up all hopes of seeing the Given press exhibited. It did not put in an appearance at the N. A. B. A. Convention at Cincinnati last fall, while Mr. Vandervort's and your own interested so many; nor did it appear at the North-Eastern, though Mr. Vandervort's was there and in operation. Mr. V. received orders for 10 or 12 machines, so that you will notice this as a further proof of mistaken economy on the part of those who do not place their goods on exhibition. Further, it forms one of the interesting features of the convention, and we are allowed to compare and judge of the respective merits of the articles on exhibition.

In the future I hope that any one who has any thing of merit to show will make it a point to have it present at the various conventions. There has been so much said and written regarding various machines, appliances, etc., appertaining to our business, that it would be really interesting to *know* what position and rank the varieties would be awarded when thoroughly tested side by side. As in the past, so may some in the future, endeavor by fine-spun theories to evade these tests; but still no amount of ink and paper will convince like the actual test. "Seeing is believing." If we can have a large exhibit in every department, our convention will be one of the leading attractions, and many will become interested while examining our bee-museum, will join the association, and embark in our fascinating pursuit.

D. A. JONES.

Beeton, Ont., Can., Jan. 23, 1883.

Well done, brother Jones. I had almost settled down into the opinion that you were getting to be altogether too busy to write for a bee journal; but here you come, as fresh and genial as if you had nothing else in the world to do but to sit and listen, and then tell the journals about it. I know it pays to go, and I know I ought to go; but an absence from home of three days piles my work over me so for a week or two that it almost uses me up; whereas when I am at my post, and keep it abreast of me, I can manage to breath pretty freely most of the time. It does us good to hear the names of the "big guns" you mention, and I know conventions are an excellent thing for our people and the world at large. I am glad of the exhibits, too, and that our conventions are drifting into a sort of fair of bee implements and products. I see, too, that God's hand is in it, in getting us all better acquainted, and, as a natural consequence, better friends.

A BRIGHT CONCEPTION.

RAISING BEESWAX FOR MARKET.

IN GLEANINGS, some one asks, what the small scales are on bottom-board of hives, having a large surplus of such. Your answer is, if I rightly remember, that feeding some kind of sugar is the cause of an over-production of wax scales. Now, if so be that you are right in your answer, can we not learn how to make up, in part, the present scarcity of wax by giving some wax-producing feed? I am not sure that one kind of sweetening has such influence; but if so, there are "millions in it" to the bee-raisers.

Have you any positive experience on the subject? If so, let us know the relative value of the different grades of sugar, etc.

A. L. KLAR.

Pana, Ill., Jan. 22, 1883.

To be sure, there are "millions in it," friend Klar. Old, old veterans in the "biz," like you and I, can see it, if the rest don't. And that reminds me that friend Olm, who is now here making fdn. mills for us, tells that there is a man in Fond du Lac, Wis., who keeps bees to raise wax, and nothing else. As fast as they get a lot of comb in their hives he pulls it out and makes the little "insex" build more, and so on *ad infinitum*, or until the honey stops. I don't know what he does when winter comes. Well, I have several times, in feeding bees, had them secrete wax at an astonishing rate, yet I didn't know enough about it, and don't now, to tell whether it was food, or something else. Friend Viallon demonstrated several years ago, and has recently verified it again, that common brown sugar produces much more wax than white or granulated. By the way, friend K., I don't believe we can make very much at it by buying sugar, if it is true that it takes from 15 to 20 lbs. of sugar to make 1 lb. of wax; and come to think of it, as honey is worth twice as much, I don't see how we can get it by feeding honey either; but we must have the wax somehow, and, in fact, we've "*got* to have it," as the boy said. Some time I will tell you about the boy, if you never heard of him.

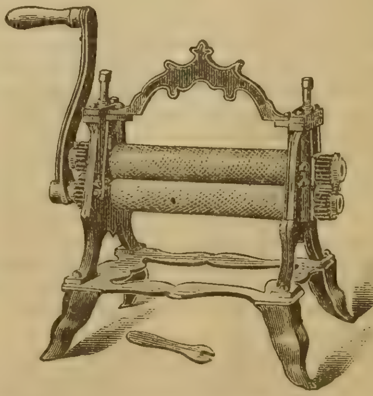
THE NEW FOUNDATION-MILLS.

MADE FOR THE FIRST TIME IN OUR OWN FACTORY.

FRIEND OLM came with his machinery about the first of the year. His plan of making fdn. mills is quite a little different from the one pursued by Mr. Washburn. Instead of driving the metal into shape with proper punches, our sturdy German friend conceived the idea of a machine that would cut the metal out of each cell, one by one. He made it work, and the machine is now in operation day by day in our building. It is a sort of automatic machine, and a tool much like an engraver's graver goes down into the metal of which the roll is made, and makes a cut. After it has passed out of the way, another similar one goes down at just the right angle, and just far enough to take out the chip made by the first. The same machine moves the roller along just the right distance for the next cell, and so on until the roll needs turning for another cell. The metal used on all our former mills was something similar to tinner's solder, being largely composed of lead. These mills are made of a composition of copper, tin, and zinc, similar to hard Babbitt metal, and contain no lead at all. The metal is so hard it would not bear raising the cells, as our old mills were made. It is a little interesting to note how two ingenious inventors like Mr. Washburn and Mr. Olm each worked out the problem, independently of the other, of making honeycomb in metal rollers.

While we use Olm's engines for cutting out the metal, we have adopted the machines we bought of Mr. Washburn, for stamping the walls. I wish to state here, before leaving the subject of roll-making that our rolls made of this hard Babbitt metal are not as handsome as the mills we have previously sent out made of the softer metal; neither is the fdn. made on them as smooth and pleasing to the eye, but it is better worked out by the bees, and comes from the rolls in a way the old kind never did. If you want handsome fdn., you will be disappointed; but if you want it for business, either brood-comb or starters, you will surely be pleased. I lay much stress on this because some of our English friends have complained pretty bitterly because the new mills did not make as *handsome* work as the old.

Another thing: We have entirely dispensed with the back-gear, because we found by experiment that even our girls could turn the rolls of the new mills with ease, with the crank right on the end of one of the rollers; and as they get along with the work very much faster, the back-gears are a great hindrance. This refers to mills for 10-inch sheets and under; for 12 or 14 inch, back-gear might be desirable. To get additional power, we make the crank pretty long for the 10-inch mill, a cut of which we give you below.



OUR TWENTY-FIVE DOLLAR TEN-INCH MACHINE.

With every mill we send a good sample of fdn. made on it; and with a very little practice you should be able to do as well. At the very low prices we make these mills, we can not undertake to alter or change the cells or walls to suit everybody's idea; or, if you will excuse me, everybody's notions of how they should be. I have satisfied myself by experiment, of what I think best, and our machines are running so busily on these that it will be a very great expense to change or make them different. We always furnish samples of the make of our rolls free; but before you judge of them, or, in fact, before you criticise our mills, I would ask you to hang a bit of the fdn. in a cluster of wax-working bees, and see how readily they take to it. Any of the mills, large or small, will make both brood and starter fdn. The small mills will, if any thing, make the thinnest. Any mill that does not suit may be returned, you paying charges. I would by all means get a 10-inch mill, for making fdn. for L. frames; although the 9-inch mills will do, it takes much more time, and more skillful hands to keep the sheets from running out of the rolls. While at the Cincinnati convention I saw friend Vandervort use a board with strips on the side, to guide the sheets squarely into the rolls. This board was perhaps two feet long, and just wide enough to let the dipped sheets slide down between the strips on its sides. We are now using sheeting-boards, of seasoned maple. They do not rough up as much as basswood or whitewood, with frequent use.

Every mill improves with use. Running the rolls together tends to wear them so as to fit more perfectly; and after months of use, the metal points get polished where they work against each other, and the fdn. comes out very much easier than at first. On first trying a new mill I would take only a sheet of wax, say one by two inches, and then if this comes out without tearing, take a larger piece, and so on. Do not try to make very thin at first; but after you get used to it, screw the rolls down gradually, and you will soon be able to make strips wide enough for sections, as thin as ten or twelve feet to the pound.

HONEY-HOUSE ITEMS.

ALSO A FEW OTHER SUGGESTIONS FROM FRIEND GATES.

I WISH to give a few items in relation to a honey-house as I have to have it, and perhaps as the most of our readers have; viz., to utilize some building already built.

A MOVABLE COMB-CLOSET.

I build my comb-closets movable, as follows: Take two planks, as wide as can be procured (mine are 18 in.); have strips 1x3 nailed to them, commencing 1 in. below the top, and put them one inch further apart than the depth of the frame. Have the top and bottom the same width as sides, nailed between them. Let the back be nailed to top and bottom. Now, the sides are as far apart as the length of two top-bars and *one inch*. A strip 6 inches wide in front, half way between the sides, holds the center-strips for the ends of frames to rest on. Doors are hinged to this center-strip. Height of closet as much as can be conveniently reached. Mine holds over 200 combs, and can be made in a day.

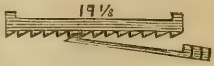
I have shutters to the windows of honey-house, and in the honey season I take out the sash and put a frame in place, which has another frame with wire cloth tacked to it, working inside on two pivots, so I can reverse sides to it in an instant, and put any bees that may be brought in, outside. I consider these, viz., the comb-closets and wire reversing window, essentials.

WORK-BOX AND SEAT COMBINED.

I don't think the seat shown in your price list has ever had half enough praise given. I could not get along at all without one, and I want the drawer by all means, to keep scissors, book of record, pencil, a queen-cage or two, etc. I only wonder how I got along without one so long as I did.

DRILLING TOP AND BOTTOM BARS FOR WIRED FRAMES.

I have also made a machine for boring the holes in the frames for wiring, that pleases me so well I wish to give you a description of it. I took an old Wilcox & Gibbs sewing-machine, and in place of the hook, or looper, put in a piece of steel umbrella-rod filed to a point, like a three-cornered saddler's needle, and 2½ inches long. This is the drill. Now, for the slide to lay on top of the table and hold the sticks: I made it of a piece of plank 5 x 19, and 11-16 inch thick. The top-bar of a frame is nailed to one edge of this, projecting above, half its width, and another flat on top 2 inches from this; this holds 6 top-bars or 7 bottom-bars. Now we want a ratchet with notches 2⅜ inches apart. It is ½ inch thick, 21 in. long, and 1¼ in. wide at the ends, and ¾ in the middle, like this. It has a hickory spring to catch into it, and the slide is ready on top. The bottom has two grooves cut across it, 9 in. apart, ⅞ x ⅜ in., and two hard-wood strips the same size, 7 in. long, are nailed to the table for the slide to run on. This completes the whole. I made mine one night after supper, and bored fifty strips before bedtime. I can bore 100 frames in three hours, and do them accurately. It is just fun. A Grover & Baker sewing-machine treadle is the best. G. W. GATES.



Bartlett, Tenn., Jan. 8, 1883.

Many thanks, friend G. While I think I would make your comb-closet a fixture rather than to have it movable, I know by experience it is a very good idea to have a place for empty combs.—Your window-screen swinging on a pivot is an old idea, but it will do no harm to bring it to mind again.—Your bar-piercer, I am inclined to think, is a valuable idea, and our experience has always favored using a drill, rather than an awl that does not revolve. It is easier, does the work cleaner and nicer, with all kinds of wood, and it seems to me must be more rapid. Our machine is much the same, only we have drills enough for the whole bar at once. We have had much trouble in getting drills that would not break; after using expensive twist drills we tried knitting-needles, and finally wire nails flattened at the end, and these were less trouble, because they would bend before breaking. I am inclined to think your umbrella-wires will be just the thing.

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

PLEASE inform me if there is a patent on the "Golden" bee-hive, by a Mr. Pickle, of Nashville, Tenn. There is a gentleman of this place selling rights for the Golden in this and Montgomery Co. I purchased one of him, and it proved a total failure in the honey line.

LEWIS A. EASTERLY.

Sandy Ridge, Lowndes Co., Ala., Jan. 19, 1883.

If the hive proved a total failure, friend E., I hardly see why you should care whether there is a patent on it or not. Nowadays it is getting to be almost the rule, that about as good an indication one can have that a hive is worthless, is to know that it is patented. Our successful honey-producers never use patented hives. You will see, by looking at our back volumes, that the Golden bee-hive has been many times reported as a swindle.

HONEY-HOUSES; AN IMPORTANT ITEM.

SCREENS FOR WINDOWS, ETC.

I THINK that friend Doolittle's bees are not very smart, or they would find that space where the wire screen extends over the top of the windows of his honey-house. I think my bees would find it quicker than you could say scat; for proof, read the following: A few years ago I stored my honey in a roughly made storage room joined to my house. It was boarded up and down, and not very tight any way, and of course the bees soon found it out. Then I began battening up cracks at the sides, around the sills, roof, and, in fact, everywhere, for 2 weeks or more; and not until they had carried several boxes of honey back to their hives did I beat them. Every day they would find some new place to get in, until finally they went around it to my kitchen door, through that, and across a kitchen of 12 ft., to the door of the honey-room. That door being tight they crawled under the casing, where it lapped over drop siding, and around the studding, and out under the casing again into the storeroom. It was not now and then a bee that did that, but large numbers. Beat that, if you can.

My present honey-house is 8x10 ft., and bee-tight; but when I first put honey in it they found a way in through the key-hole, about as soon as there was honey in there; and whenever honey is not plentiful in the fields, they are hunting every crack and joint from sill to roof-ridge; but have never made it a success, as it is plastered inside. To get those out that get carried in, I have the top sash of the windows hung on pivots, and a spring bolt at the top, so I can draw the bolt, tilt the sash, brush them out, and tilt sash back.

I will tell you next time how I keep my empty combs. A. A. FRADENBURG.

Port Washington, O., Jan. 8, 1883.

Thank you for calling attention to this matter, friend F. When I read friend Doolittle's description of the way in which his window was fixed so all the bees inside could at any time get out, while none outside could get in, I fell to wondering whether it would work with such bees as we have sometimes. On further reflection I decided that, as friend D. is a very careful man, he probably does not have bees educated up to the pitch of pilfering, that we often do, and that the device will be very valuable help to all who keep things in any sort of decent order. I can readily understand, friend F., how the bees worked and "wiggled" (I think that is the right word, isn't it?) to get at the honey, for I have seen them. To take an old building and batten it up so bees can't get in, after they have been educated to it by several pounds of honey stolen during an interim of a week or ten days, is almost an impossibility. Why, it seems as if they would go through inch boards, when they get really into the merits of the case, and it is "a good day for robbing." Will those who test, or who have tested friend Doolittle's idea, please report? I presume it is well known that our English friends have a device called a bee-trap that lets bees pass one way, but not back again. It just now occurs to me that we did try having the wire cloth loosened at the lower end, on one of the windows in our wax-room, and it answered very well by letting the bees outside as soon as they had buzzed themselves tired enough to fall through the opening.

A LETTER FROM JERUSALEM.

Holy-Land Bees in their Native Home.

ALSO A FULL ACCOUNT OF THE DEATH'S-HEAD, OR THE MOTH THAT "SQUEAKS."

I TAKE the liberty of addressing you these few lines, hoping not to annoy you by a little report concerning the death's-head moth. Being a subscriber to your journal by the intermedial of my friend and teacher in apiculture, Mr. F. Benton, living at Athens at the present, I saw in the November number of GLEANINGS, page 559, an article, "A Moth that Squeaks." Having previously made some acquaintance with that "moth that really squeaks," I thought of sitting down to-night and giving a little account of my own experience with them.

On the 26th of October, this year, preparing my hives for wintering at the "Gardens of Solomon's Apiary" (near Bethlehem), I took two dozen of these moths out of some such hives as had the entrance high enough to permit them to enter. In one of the hives I found seven such moths, all skeletons, for the bees had taken out every portable particle from them, stripped them of the thick hair growing over their bodies, and began thus propolizing them. In August, September, October, and November, I frequently met with them disturbing the bees, but only in the night. When I first saw them flying before the hives, I could not make out whether the bats were disturbing my colonies, and began chasing them. When I succeeded in capturing one, it began squeaking about as a mouse would, although not quite as loud; since then I watched them closely, and captured some also, by means of a butterfly-catcher. They eat only honey, sucking it from flowers; but when they find such hives as allow them to enter, they prefer to suck it out of the combs, taking a teaspoonful of honey at a time. The insect measures 5½ inches across the wings, and about 2½ inches from head to tail. I should very much like to send you a specimen; still, you could not "hear it squeak."

I possess 3 apiaries in Palestine, besides the Mt. Lebanon and Cyprus apiaries, in connection with Mr. F. Benton. Bees fly gaily, but have nothing to carry in, when perhaps their North American friends are snugly tucked in their underground winter lodgings. PH. I. BALDENSPERGER.

Jerusalem, Dec. 14, 1882.

Friend B., there are three reasons why we feel glad to get your kind letter. We are proud to say we have, for once at least, had a letter from that famed old city of the Bible; we are glad, also, to hear from our friend Benton; and, last of all, to know all about that death's-head moth, so much has been said about, and to know that it really does "squeak," as well as eat honey. Many thanks for the very full facts you have given us. The name of Jerusalem has been made dear to us by our recent Sunday-school lessons.

ADULTERATED COMB HONEY.

ALSO SOME REMARKS IN REGARD TO ADULTERATIONS IN GENERAL.

I INCLOSE here a slip cut from the editorial columns of the Cincinnati *Commercial Gazette* of Jan. 12, as follows:—

> It used to be considered safe to use honey in the comb, but now nearly all this is manufactured. At first the pure honey was extracted from the comb and the bees were fed on glucose, from which the comb was rapidly refilled; but now artificial combs are produced, and bees being fed on glucose, so-called honey is turned out in comparatively large quantities, and bees at the same time are being demoralized.

What the editor says of the adulteration of other foods, we can leave to those engaged in the production of those particular articles; but what he says about honey, touches the honor and the interests of bee-keepers. Do you suppose the assertion, that "nearly all the comb honey is manufactured," can be shown to be a slander on the honey-producers?

For my own part, I have raised honey for market, and sold it, and could defy any chemist to find any thing in it but what the bees gathered in the fields; in fact, it was absolutely *pure honey*, and I have scarcely any doubt but that the honey sold by all the bee-keepers of our acquaintance is just as good, and the most of them would not know glucose if they should see it.

But if it be true, that there is adulterated honey on the market, it behooves the producers of good honey to expose and put a stop to such adulteration; for to just the extent that the belief extends, that honey is unsafe to eat, to that extent is the production of honey, and the bee business permanently damaged. Besides, the adulteration of honey would, in the long run, be unprofitable, even to the guilty party; because for every dollar that a dishonest person would make selling impure honey, a hundred dollars would be lost by the lack of demand for any honey, good or bad, caused by want of confidence that any of it was good.

It would be a tremendous pity to have the great and growing bee interest injured to the extent it would be by the general belief that all honey is spurious; there are so many people who depend largely on it for their living, and so many who make the production of honey an auxiliary to their other occupations, yielding them not only profit, but instruction and pleasure, that it would be an immense loss, pecuniarily and otherwise, to lose the market for their honey. And it would be no small deprivation to the lovers of good honey to deny themselves the pleasure of such good eating, for fear they should get something spurious.

I think few persons, outside of the bee-keeping fraternity, have any correct idea of the number of bees actually kept, and the amount of pure honey gathered in the country. It is probable that the mind of the editor who wrote the above article is associated with the old style of keeping bees, before movable frames were used; when the only way to get honey was to bore an auger-hole in the top-board of a box hive, and set a "cap" on it to be filled, or kill all the bees in the fall, and "take up" the honey. To such a person, the sight of the quantities of beautiful honey offered for sale only suggests, "manufactured from glucose;" "too much of it to be pure honey." They have no knowledge of the improvements in the breeding and management of bees discovered in late years, which insure the large production of pure honey, and which elevate bee-keeping to the importance of a regular and profitable occupation.

And right here we can see the importance of the compilation and publication of statistics showing the number of hives kept, and the number of pounds of honey produced, so that our editors can have some knowledge of the quantity of good honey gathered by the bees, and need not jump at the conclusion that the honey is counterfeit because of the abundance.

Of course, it is perfectly right for newspaper men to warn people of food adulteration. The important thing is, that they shall state only that which is *true*. We are told that "the bees are being demoralized by feeding on glucose." Just how the demoralization takes place, the editor does not say. I am sorry he did not tell us; for if he had, I have no doubt we should have had something in bee literature quite entertaining, if not instructive. He probably means that the bees are injured in their moral character, perhaps made lazy and unprincipled by being fed on glucose, instead of being compelled to practice habits of industry by gathering pure honey in the fields, or perhaps rendered dyspeptic, and consequently unreliable, in their moods and tenses by having their stomachs full of such stuff as glucose.

Well, I expect to buy some queens and bees in the spring, and I want it distinctly understood by all queen-raisers, that I do not want any "demoralized" bees, none whose morals are damaged by eating glucose; only those of good habits wanted; only those will be received that can bring a certificate of character stating that they have not been fed on glucose.

Cincinnati, Ohio, Jan. 11, 1883. THOS. HUNT.

The article you send us, friend H., will probably go the rounds, and many people will believe it; but I do not think those who give place to such items have any idea they are true. Editors, as a general rule, are well-informed men; but for some time past there has been quite a demand for sensational articles on the adulteration of food, and reporters as well as newspaper men, knowing this, are keeping the papers full of it. No doubt it is well to consider these things, and no doubt but that great harm has been done, and people should be awake to the matter; but the opposite extreme is in imagining that everybody is a cheat except yourself, and that your neighbors, right and left, are perpetrating frauds on each other every day. Within a few days one of our bee-men writes that some of his own honey was analyzed by some professor from some university, who styled it principally *glucose*. I do not believe the *liquid* honey in our market is, as a *rule*, adulterated, nor do I believe many well-established grocers will give you sugar or any thing else that is adulterated, when you ask for the pure article. Are bee-men the only men in the world who are honest? We are all of us more or less responsible for the folly that is going the rounds of the papers, and we ought to be ashamed of it. Adulteration will out, like murder; and the man who is proven guilty of such littleness *is* killed for ever in business, and in the estimation of all who know him.

HALF-POUND SECTIONS, AND OTHER MATTERS.

FRIEND BOOMHOWER'S IDEAS ABOUT THEM.

I SEE half-pound sections quoted as high as 30 cts. per pound. Now, unless honey in half-pound sections brings more than 5 cts. per lb. in advance of that put up in 1 and 2 lb. sections, I doubt if any thing is gained by the change; but I fear much will be lost.

In our market here at Albany, I am informed, by reliable dealers, that they sell just as many 2-pound boxes of honey, and in some cases more, than they do one-pounds, set side by side; and I can not get one cent on a pound more for a pound section than I can for a two-pound; and if the 1-lb. box had never been brought to notice, I really think it would have been just as well. And, by the way, I have heard a good many hard words hurled at our friend Novice for bringing them into use; and if he had attended the convention at Albany, when the "box question" was discussed, I think he would have been lucky to get off without having his hair pulled.

SEPARATORS.

I have often tried to get evenly built combs in my sections, without the use of separators; but to say that I have failed in every instance would hardly give the matter a true expression. Yes, I have more than failed, and I think that Mr. Heddon must exhibit some *hidden* power over his bees, to induce them to build combs evenly and where he wants them to. How many are there besides Mr. Heddon who use no separators, and have their combs nice and straight? When a colony of bees first commence to work in the surplus chamber, they generally begin in the center, or part that is located over the most thickly settled portion of the hive or brood-chamber, or in that part of the hive that contains the brood. First a few sections are taken up; and as they proceed from that portion first occupied, out toward the outer side, the cells taking the same position are elongated far beyond the center of the box or section, and the result is, a section with the weight of the honey all on one side. This is my experience, and I shall never try to produce comb honey in sections without separators.

HOW TO KEEP GOOD FRIENDS WITH OUR NEIGHBORS.

Since I have been keeping bees I do not know that I have gained the ill will of a single man or woman in my neighborhood. Somehow my bees never seem to sting or bother any one; and if they do, I never hear any angry threats that my bees must be removed from the village. Located as I am within ten feet of the main street, it seems strange that I do not get into a fight with some of them. Well, I will tell you how I manage to keep good friends. If I hear of ony one getting stung in the neighborhood, I send or carry them a nice section of honey; or if I have none in sections I send a few pounds of extracted, and the result is, instead of getting enemies I generally get orders for some honey; for when I offer to *give* them some nice honey, you see they will see how nice it is, and after I am gone they will say, "Well, there! isn't he clever?" and, "Oh how nice this tastes! I guess we shall have to buy some." And the way it generally turns out, I get a customer and a good friend at the same time.

Last spring while in the store one evening I overheard an old man telling another gentleman that we should have no more fruit, because there were so many bees that they would eat the fruit-blossoms all up. Why, he said that the bees were so thick on his apple-trees that they dug the bloom all off trying to get to the honey, and that all of the bee-keepers ought to be prosecuted, and that he wished he had all of the bees in the country under a straw-stack. He would touch a match to it and burn up the whole business. A short time afterward I gave him a small pail of honey, and explained to him that bees did not harm the blossoms in the least, but, on the contrary, did them good. Well, he said that it was the first that he ever knew that bees did the blossoms good. He supposed that they sucked away all the juice which made the fruit. But I am sure he believes me now, for we have had an immense crop of fruit this last autumn. So, my friends, if your neighbors get angry at you because your bees sting them, send them some nice honey, and it will heal the wounds. F. BOOMHOWER.

Gallupville, Scho. Co., N. Y., Jan., 1883.

Friend B., we succeed in bee-keeping, or any other kind of business, when we work for the good of the people at large; and I believe the masses have decided, pretty unanimously, that they want a small package of honey at a time. Notwithstanding what your Albany bee-folks said or thought about my poor self, the demand for 1-lb. sections the world over has been almost the *wonder* of the world. We made and sold about one million ourselves last year, while all the other sizes amounted to scarcely one-tenth of that number.—I admire your way of letting your neighbors see what good honey is like, and of disarming prejudice, and I am sure it pays best in the long run.

WIDE FRAMES, OR CASES, TO HOLD OUR SECTIONS.

WHAT SHALL WE USE?

WE are a progressive people. To-day one thing is all the rage, and to-morrow it is dropped for something new. We get all fixed up with surplus arrangements one season, and by the next season some one's ingenuity has made some great improvement, and so all our fixings must be laid aside for new, if we wish to keep abreast with the times.

A few years ago you gave us the one-pound section and the broad frames. It seemed as though this was nearly perfection—good enough. It seemed one pound was about the right thing; but now, just as it is becoming a standard section, somebody thinks we want a smaller one. Now, I do not believe there is any call for a smaller section than the one-pound; but if we must have a smaller one, I say let us have it so it will fit into our regular broad frames.

Then there is the combined case you got up. It is a regular stumbling-block for beginners. They do not know which they want, the case system or the broad frames. I must confess, myself, I like the form of giving the bees 28 sections, one deep, covering the top of hive better than to give them twenty-eight in wide frames two deep, covering half the hive; but it seems to me the advantages in favor of the wide frames are two to one—first, not being any space between the two sets of sections; second, 8 sections can be handled at once instead of one; thirdly, by the use of the division-board the surplus room can be contracted, even to one frame of sections (a great advantage in the last part of the season, as the sections can be all crowded out or filled, and not have a lot of partly filled sections, as with the combined case). The idea of sending the case to market just as it comes off the hive is not a good one, as any one will find out; if he thinks any thing of his reputation as a honey-producer, the sections should all be handled over and graded before shipping.

Now, friend Root, this brings me to the question I wish you to ask friend Heddon. Many times, in speaking of the wide frames, he says, "If you use wide frames (I would not)." Now, we have perfect confidence in friend Heddon's ability as a honey-producer and as a teacher, and have no doubt he can explain satisfactorily why a case is better than the frames; but never having seen that explained, we wish to call on him to explain it; also let us know if he has had practical experience with the broad frames. JAMES B. MASON.

Mechanics Falls, Me., Jan. 14, 1883.

The respective merits of wide frames, or a case of sections on top of the frames, I have considered at length in former articles, and I do not know how any one can tell a beginner, or any one else, which plan will be best for him under all circumstances, friend M., especially when people have such different ideas of things in regard to which is best. Your ideas in regard to grading the honey are very good, and are a strong argument in favor of wide frames and separators.

IS BEE-KEEPING TOO HARD WORK FOR WOMEN?

BY ONE WHO HAS TRIED IT ELEVEN SUMMERS.

THE question will soon be answered in a practical and general way, since, from Maine to Texas, women are turning their attention to the pursuit in a yearly increasing ratio. That women should keep bees may, in due time, become almost as much a matter of course as that, in Germany, they should engage in field work.

"The American women, they is too lazy, and they is too proud," said a German woman, after telling me of the work to which she had been accustomed in the "old country." That such work was "too hard," or in any way undesirable for the American woman, seemed beyond her comprehension. And that bee-keeping can be "too hard," seems equally beyond the comprehension of certain of our sisters who not only enjoy their work, but find their strength sufficient thereunto. They compare it favorably,—as, indeed, I have often done myself,—with certain kinds of housework, from which there is, for some women, no escape.

That a day at the wash-board is harder than a day in the bee-yard, is true. And some of us who could hardly earn the salt for our porridge at washing, can at least provide for it the *sweetening* at bee-keeping. But it does not follow that the average washwoman would do even this much. I know of one whom I would not trust with the care of one colony —to whom I could not conscientiously sell one. But she does her washing with ease, and—*if carefully watched*—she does it well. Bee-keeping would be for her too hard a *study*.

I have in mind, also, certain teachers and seamstresses who are supporting themselves by their work. They have the brains which my washwoman lacks, but they have not a tithe of her physical strength. They might do *something* at bee-keeping, —the care of one or two colonies might do them good in many ways,—but they could not depend upon it as a *means of support*. It would be folly in the extreme for them to relinquish the work they understand, with the hope of providing themselves shelter, food, and clothing, by keeping bees.

And there are farmers' wives sadly in need of spending-money, and looking toward bee-keeping as a possible help, who are so weighed down with other cares that they should pause and consiedr well how these may be lightened before they venture to add thereto the care of bees; "For is not the life more than meat, and the body than raiment?"

Whatever a woman's fitness in other respects, she should have the additional advantage of a home. Such a one, with comparatively little risk, can satisfy herself by experiment whether or not the work, if engaged in somewhat extensively, is likely to prove "too hard." It is, in my opinion, the best and only way to settle the question. Still, a little friendly discussion respecting it, among the sisters, with an interchange of opinions and experience, may be of some advantage. It can not fail to be so, if it should bring to light the improved methods which enable one to perform with ease what another finds "too hard."

For instance, for the benefit of the sister who, on page 438 of last volume, indicates one of her difficulties, will not Mrs. Harrison tell us just how she manages to avoid moving heavy hives, in swarming-time? If she uses the Brooks swarm-cacther, will she kindly tell us how she managed previously to its introduction —which was only during the past season?

I am somewhat ashamed to confess, that the swarm-catcher was not tried in our apiary last summer, though there was abundant need of it, and we fully intended—but, no matter about that.

Our practice is to move the old hive back, setting the new one in its place. If there be time, the deserted sections in the cap are first taken off; but if not, as is often the case, the old hive is *shoved* back—not *lifted*. If there be but one to move it, it is twisted around and off the stand, in the easiest fashion possible. When the swarm has returned it is carried to a new stand, and the old hive is shoved back into place. Sister and I usually work together, but we can manage in this way alone when the swarms do not come too thick and fast. But it is hard work.

Nor do I hesitate to confess, that our bee-keeping the past season has been quite "*too* hard work." Perhaps I should say, rather, that we had, combined, too much bee-keeping (51 colonies in the spring, 75 now), and too much housekeeping for our strength.

We happen to live in a place where reliable help in the house is hard to obtain, while help in the bee-yard is out of the question. We supposed we had provided in-door help for the season; but at a critical time, during haying, and some little time before the basswood harvest, we were left alone, nor could we obtain any help which was better than none, for the rest of the season.

The most important results of our summer's work may be briefly stated. We have determined to sell, or give away, every one of our 75 colonies next spring. I have pleaded vainly with Nellie to be allowed to keep one, promising to select the weakest there may be. But she is inexorable.

After eleven summers among the bees, we are to try to live without them. We are to have time to see our friends, to make the new house somewhat more homelike and cosy, etc. And when I venture to inquire, "But, how shall we do without the—the spending money?" she answers, "Cyula, another such season as last summer, and we shall for ever more have no need of spending-money!"

She is not very logical; but if she be of the same mind next spring, she shall have her way.

Jan. 15, 1883. Cyula Linswik.

Many thanks, my good friend Cyula, for your kind letter, that savors of fairness all the way through, and that treats this matter in so wise a way to; but I want too make a little protest to my friend Nellie, inexorable though she may be, as a general thing. It is about this same "spending-money" *you* touch upon, too, at the end of your letter. You say during haying, etc., it was that you found so much trouble. Now, why not sell off the "haying" instead of the bees? Did the hay, all together, bring as much money as the bees? Of course, I know nothing of the circumstances, but I can illustrate my meaning by telling a story I have several times told before. One year, when our honey crop sold for over a thousand dollars, an old bee-friend who lived near, and had as many bees as I, or more, stopped extracting when it came haying and harvest time, because he couldn't leave his grain to spoil. The entire crops of his small farm would not bring $300.00 (and it was a comparativly easy matter to hire men to do that work, too) and yet he let surely over $500 worth of honey slip through his fingers, and did it with an easy conscience too. Have I got off the subject of bee-keeping for women? I think not. If you and our good friend Nellie would keep bees, and not be worried with any other cares, I am inclined to think you would enjoy it more than any thing else in the world; and, also, that it would give you a better income than doing any thing else. Well, if that is so I appeal to the folks who do the "haying" at your house, to take immediate steps toward some arrangement that will let you two follow your own taste whereunto you are called of God, and then, perhaps, you may write us something a little more cheering on the subject of bee-keeping for women, after the season of 1883 has passed. By the way, friend Cyula, you didn't tell us how much "spending-money" the 75 produced.

MY NUCLEUS HIVE.

A HALF-LENGTH LANGSTROTH FRAME.

"COME, be short."

"Yes, yes."

Sides 10⅝ in. long by 9¾ wide by ½ thick; ends, 6½ in. long by 9¾ wide by ⅞ thick; bottom, 13 in. long by 7½ wide by ¼ thick; cover 10⅝ by 7½ by ½. Two cleats on sides for handles; one cleat on front *end* of bottom, to keep from warping; two cleats on top of cover, to keep that straight. *Front* end, ⅜ narrower than the above "9¾," making it 9⅜ for entrance. Paint, two coats, and use shade-board.

FRAMES.

Ends, 8 in. long by ⅞ wide by ⅜ in. thick; top and bottom bars, 8⅛ in. by ⅞ by 3-16. Extra outer top-bar, 9⅝ in. by ⅞ by ⅜.

HOW TO FILL THEM.

The regular top and bottom bars have 4 holes, for wiring with No. 30 tinned wire. These holes are 2 in. apart, and the two outside ones are about ¾ in. from the side-bar. Wire four of these frames, and fill them with comb fdn. by the button-hook hand-pressing process. Now, two of them will just fill a standard L. frame (the extra top-bar is not on yet). Insert two of these filled L. frames in the center of a good strong colony. Within 24 to 48 hours the fdn. will be new comb, and full of eggs. You can now remove them, or leave them till the eggs are hatched, or till the young bees begin to emerge, and then you can remove them (with adhering bees), or get bees from some other hive, or from a natural swarm, or any way you choose, and use any of the many simple effectual methods to newly locate the bees (but this article is not on queen-rearing, but nucleus hives), and nail on your top-bars, properly placed, with one 3*d* fine nail in each end, left out about 3-16, so that when you wish to unite nuclei for wintering, all you have to do is to pull off these outside top-bars, and slip the little frames into half the number of L. frames; then put them in full-sized hives, and you know the rest. When spring comes, if all are alive you are ready early to fill more nucleus hives. If part are dead, the same is true by using half brooded and half empty combs. If all should be dead (and there will not be any sense in such a state of affairs five years hence, or less, for we are going to get control of this wintering business soon), all you have to do is to repeat the process of last season, when you began with the fdn. I have used 8 small frames, 2 larger ones, 2 full L. frames, in both narrow and full-sized hives, and hives divided into 2 and 4 parts, for queen-rearing; but the little hive described above "gets away" with them all. Nothing so nice to ship a choice queen in. On arrival, the queen, combs, and brood can all be utilized at once, if the purchaser is fortunate enough to have the standard frame. The empty nucleus hive can be laid aside till the owner wishes to rear a few queens. I have used 30 of them, and have now under construction 175 more, 125 for my own use.

Well, well; I have got only six pages, not enough for a 3-cent stamp. Just let me pull the stopper from my "bottle of all sorts."

HALF-POUND SECTIONS.

Just a minute. Gleanings is quite quiet on the ½-lb.-section business. Mr. Osborne and you have a few words to say, on page 10. "I kick" on both of you. Mr. O. has too *thin* a section, especially if separators are to be used. He seems to make no allowance for separators, while the section *should* be one-fourth wider with than without them. He is not far out of the way of ½ lb., I think, however. Why, you have accommodated the old broad frames nicely, but yours is about a ¾-lb. section. I call you to order, sir. The subject is "½-lb. sections." We see an advantage in *thinner* combs.

Now, that queen-excluding honey-board. Are we going back to the time of Huber? Please excuse me; but I must say, that I really think that, whoever thinks he needs a queen-excluder, needs only more light regarding the best methods of obtaining the most comb honey in the most marketable shape.

Now, I have formed my private opinion of Mr. W. E. Flower, of Ashbourne, Pa., though I don't remember knowing that such a man lived till I saw his article, "Blacks v. Italians," on page 13; and, publicly expressed, it is, that he is honest and fearless in expressing his convictions; that he keeps bees for profit; that he is going to "get there;" that we shall hear from him again; that he will soon be in accord with just what you state on p. 21; that there are indications that a dash of black blood improves the Italians, especially for comb honey.

Dowagiac, Mich., Jan. 11, 1883. JAMES HEDDON.

Well, friend H., you have got neighbor Harrington's idea for nucleus hives, exactly. He has had them in use two seasons, and I believe likes them pretty well, although he has not as yet got round to pulling off the top-bars, and hanging them two in an L. frame. The little frames seem to work right; but still there is an inconvenience in not being able to exchange a single comb in these little hives with any comb in any of the larger hives at any time. When stocking them with bees and brood he just cut the brood out of a large frame, divided it in the middle, and it just filled two small ones. His plan to keep them from starving was to keep granulated sugar all the time on the bottom-boards. These half-sized frames have been advocated and tried a great many times, but no one keeps them more than two or three years, so far as I have been able to determine. I confess I like the idea; but then, again, I don't like the idea of more than one regular frame in any apiary, and, I can almost say, or anywhere else.

CAN WE AFFORD TO USE THE HALF-POUND SECTIONS?

WHAT WILL IT COST US TO DO IT?

MUCH is being said of late relative to our using the ½-lb. sections, what the size shall be, whether they can be used without separators, etc.; but I have failed to see much, if any thing, said regarding their profitableness to the producer. Much is said about our catering to the wants of the consumer, and about the demand regulating the supply, etc.; but I wish to say, right here, that the consumer would never have demanded a ½-pound section had not the producer placed such before him. It is this strife, regardless of *cost*, going on among our bee-men, to see which can put something upon the markets a little different from what his neighbor uses, that has caused ½-pound sections to be quoted in our markets, and not the demand of the consumer. The same thing can be truthfully said of all the different styles of packages since the Rev. L. L. Langstroth gave us the 6-lb. box. The demand for a smaller box containing but a single comb of honey would doubtless have sprung up in due time; but the sequel shows it was the ever-restless disposition of those keeping bees that preceded the demand, and thus educated the consumer, or caused him to call for a smaller box. Thus, a few of our bee-keepers have sent sections holding about ½ lb. of honey to Crocker & Blake, of Boston, and the result is, quotations from them which have nearly upset the bee-keeping world, and set them crazy over the subject, without a single demand from the consumer upon them.

I said, a little while ago, that these things were gone into regardless of cost, and the object of this article is to show those, not entirely bereft of reason on this point, what it will cost us to produce a pound of honey in these ½-lb. sections. As our bees could work in the 2-lb. box or section to just as good advantage as in a larger 6-lb. box, I will take that as a standard. As this section sells in market (as quoted by D. W. Quinby, of New York) at 23 cents (his lowest quotation), I will take that as the standard as to price. After careful experiments and a large correspondence, besides talking with many of our most practical bee-keepers, I have come to the conclusion that, by the use of the 1-lb. section in preference to the 2-lb., we sacrifice ⅛ of our crop of honey on account of cutting the cluster of bees up so much, making a disadvantage to them which amounts to ⅛ of our crop. Then we have twice the number of sections to buy or manufacture, and put together, and twice the number of pieces of foundation to prepare, saying nothing of the larger amount to use. Then comes the extra amount of handling, from the time they are ready to put upon the hives till they are ready for market. Without going into further detail I will say that, after careful figuring, I have decided that the loss we sustain by using the 1-lb. section instead of the 2-lb., amounts to at least 1-6 of our crop, which, taking 23 cents as our standard, would be nearly 4 cents. Hence, it will be readily seen that the 1-lb. section should sell at 27 cents, to warrant us in using that style of section.

There are many points of minor importance which could be urged on both sides of the question; but after summing them all up they would not materially change the above conclusion. When the 1-lb. box or section first came into notice I looked over all these points, and find minuted down in my diary these words: "When the 1-lb. sections sell at 25 cts. per lb., I can make the same profit from my bees by raising honey in 2-lb. sections and selling the same at 20 cts., that I could to adopt the 1-lb. When the 1-lb. sell at 20 cts., I can do as well by selling the 2-lb. at 16 cts.; and if the 1-lb. sell at 15 cts., I will hold to the 2-lb. section, if I can get 12 cts. If a greater difference in price exists, I will change sections; but not before." Hence, to-day finds me still in favor of the 2-lb. section, as the difference in price is, as a rule, not over 2 cents per lb. in favor of the 1-lb. section.

Now, if we adopt the same line of reasoning to arrive at the truth regarding the ½-lb. section, we shall find that, by its use, we shall lose nearly one-half of our crop. At the North Eastern Convention recently held in Syracuse, Mr. F. C. Benedict and Mr. Newman, of Wyoming Co., N. Y. (the parties who have furnished Crocker & Blake most of their honey in ½-lb. sections), when asked, said that they thought they could get only about ⅔ as much honey in the ½-lb. section as in the 1-lb., and that they used it only in the greatest flow of honey, as the bees would not work in them to any advantage when honey was coming in moderately. Now, if we add to this the extra cost for sections, and the time necessary to handle them, from the time they are taken in the flat till they are ready to go to market, we shall see that the placing of the loss at ½ is not far out of the way. Then if we apply this to our standard, we shall see that ½-lb. sections of honey should sell at 46 cts. per lb., to warrant our going into them. As there is no prospect of our getting this, why discuss the best size, etc., instead of discussing the subject as regards its paying qualities?

Again: One of our most practical apiarists, who had watched the honey market for years, told us at the convention that if we all placed our honey on the market in ½-lb. sections in the fall of 1883, it would not bring a cent a pound more than if all placed their honey on the market in 1-lb. boxes, and I believe he was not far from the truth.

I have thus written my views regarding the small sections, hoping that, by so doing, I might persuade our brethren not to go into this thing "in haste, to repent at their leisure." As the 1½-lb. sections sell in market at the same price as the 1-lb., and suit my surplus arrangements just as well, I shall continue to use those in connection with the 2-lb. section, thus attesting my faith by adhering to the thing which gives me the greater profit.

G. M. DOOLITTLE.

Borodino, N. Y., Jan. 16, 1883.

I am inclined to think, friend D., that your views are a little extreme in the matter, although it may be as bad as you say. Granting it is, if our friends still insist on little packages, we shall be driven to take up the old question of some means by which we can cut comb honey up into little squares, and not have it "leak." At the Michigan convention I suggested that a large sum of money could easily be raised for the man who would show us how to cut up our honey, after we had got it in full-sized frames. I suppose it is well known, that the bees will make beautiful honey, and at a great rate, in nice new ordinary brood-frames, with the help of fdn. Can it be done?

A GRATEFUL A B C SCHOLAR.

ANOTHER PLEASANT LETTER FROM OUR FRIEND ROESE.

SEEING no report from our Badger State, I shall take great pleasure in informing you of my prosperity with my bees during the past year. I am an old bee-keeper; kept them without profit for 10 or 12 years, and yet I am just in the A B C class. I used to keep them in home-made box hives. In the winter they would die, and in the summer they would fly away. Six years ago I lost them all. Five years ago I took one swarm in box hive on a debt, and commenced the old box-hive way again; and only two years ago I got knowledge through *Farm and Fireside* of GLEANINGS. Since reading this journal, my interest in the new way of bee-keeping became awakened, and I adopted, gradually, the Langstroth and Simplicity hives.

In the fall of 1881 I went into winter quarters with 45 colonies, and wintered safely 35, which number increased by natural swarming the past summer to 86 swarms. I sent for a Novice extractor and other implements and supplies rather in the rush of business, and the result was, that every thing went wrong with me; my goods were miscarried by the carelessness of railroad officials, and I lost the best of my honey-flow. On receiving my extractor, July 23, I went to work with all my might. I extracted from such colonies as were in movable-comb hives, and transferred other swarms from candy and cheese boxes and nail-casks, into new Simplicity hives, and succeeded in gathering a honey harvest amounting to 1200 lbs. of honey—about 500 extracted and 700 in combs; and I should judge, from the free use of honey in the family, of which I have not kept account, about 200 lbs. were thus consumed.

My extracted honey I marketed in Mason fruit-jars. Price charged for quart, 55 cents, and ½ gallon, $1.00; sold all at the rate of 15 cents per lb. My comb honey was in bad shape, a large portion in large wide frames for holding section boxes, for I did not get my Simplicity sections in time; and when I did get them I could not fold them without breaking. I was obliged to let the bees work in wide frames, and fill whole upper story; consequently I had to sell it all at 15 cents per lb.

On summing up all income for bees and honey during the past season, I have realized the sum of $244.20. On deducting from this amount $71.30 expended for hives, implements, fruit-jars, tin pails, and supplies of various kinds, I have a profit of $162.90 left, which profit paid a mortgage on our homestead, which hung over our heads for 7 years past. The principal was $150, and interest, 10% per annum. This my bees paid, within $2.90, both principal and interest, and blacks at that.

Friend Root, if you had seen the bright eyes of my "better half," and the cheerful countenance of the juvenile "Badgers," you would have joined in with us in a hearty laugh and pleasant smile on seeing me carry the gold and silver in a little tin pail to our next-door lady friend, who held the mortgage. You "bet" we slept soundly that next night; and little Minnie, your Maiden's Rock story-teller in Sept. JUVENILE, said, "Father, as you have that mortgage paid, you will save $15.00 interest next year; can't you afford to buy me button shoes next summer?" I answered with a hearty "Yes." Don't you think so too?

Now, my good friend Root, I owe all this prosperity in bee-keeping, while in the A B C class, to your good instruction through GLEANINGS and the A B C book. My bees have paid nearly all my little debts. We all think and talk about Mr. Root as we would a dear friend, and you have our best wishes, both of little and big in the family, and we should feel lost without GLEANINGS. Please don't forget to send Nov. and Dec. numbers. If I don't get them there will be a link missing in the connecting chain. I am greatly encouraged in bee-keeping, and will gladly give you credit for instructing me, and God the glory for his blessing. I feel better than I did when thieves stole my bees and honey last October.

TITHING.

I went into winter quarters with 76 swarms of bees, mostly all in good condition, packed in chaff. It seems to me that the Lord, the origin and fountain of all blessings, ought to have a share in them. Don't you think so? I have an impression, that the tithing system is binding on all mankind throughout all ages and generations. If so, the Lord would own 7 colonies in my apiary. What do you think?

STEPHEN ROESE.

Maiden Rock, Wis., Jan. 6, 1883.

I am very glad indeed to see you are so grateful, friend R., and I rejoice, too, to see it take the shape of gratitude to God. I, too, have paid off mortgages before now, and I think I can fully sympathize with you about the time when you had the "honey money" in that tin pail. There are few things in this world I enjoy more than paying honest debts, especially after I have been working hard, and praying too, for the money it required. About paying tithes: While I entirely agree with you, that something is due to God from every one, I am not yet sure it is the best way to set apart a hive of bees, or several hives. In many cases it would make extra expense and trouble to keep the yield from them separate; and then, too, these special hives might yield nothing in the hands of some, or during a bad season. Would it not look a little like bargaining with God, that, if he would give you so much you would give him so much? There are some who promise to give the Lord a tenth of all they make during the year, and this may be a very good way, if one doesn't get to making even that a sort of bargain, and then accuse God of not having prospered him, when it was all owing to his own improvidence that he did not succeed. I would rather put it this way: We all owe God the Father a debt, and I would strive to pay this debt (remember, it may be only the widow's mite) first and foremost; and I would make it a point to give God something every year, any way. Now, besides this, if he has prospered you, and you have made a clear gain of some money during the year, by all means give at least a tenth of it to the spread of the gospel.

HALF-POUND SECTIONS.

WILL THEY PAY?

ON page 17, Jan. No., C. C. Miller says he doesn't know but he can get as much honey in 1-lb. sections as in 2-lb., but he has never tried the latter; but he thinks he could get more in the 2-lb. sections. Now, I am in just that same fix: I don't know either. I use the 2-lb. sections, and have never used the 1-lb. box. I am of the opinion, that bees will store honey faster in 2-lb. boxes than they will in smaller ones. Will some one who has tried both please stand up and tell Mr. Miller and me, and others who don't know, what the difference is? If all producers of honey should adopt the ½-lb. box, which is now being talked of by some, who would be benefited by the change, the honey-producers, the supply-dealers, or the consumers of honey? I think the supply-dealers would be the ones who would be benefited. Why? Because, first, it would increase their business in cutting and furnishing sections, etc., as many more would be required to serve the same purpose that a less number would of the 2-lb. boxes. And, as has been already stated on p. 10, Jan. No., in reply to Mr. Osborne, the work on them will be nearly the same, and the amount of material will make but little difference; so, then, if the price per 1000 will be nearly the same for the ½-lb. sections that it is for the one and two pound, then it will not be for the interest of the bee-keepers to adopt the ½-lb. section. And, also, if you should make the ½-lb. section as narrow as Mr. Osborne suggests, it would necessitate the use of more fdn., and for supply-dealers to furnish which, would add much to their profits, provided the supply of wax would hold out. You see, if you make your sections so narrow as to have combs worked as thin as natural comb, bee-keepers have got to use more fdn.; and it is more labor to handle more and put more in; and in view of a short supply of wax, and advancing prices for comb, the ½-lb. section will increase the cost of honey for the producer; and if our honey will not sell for as much more as it costs to produce it (and it will surely *not*), then it will not be beneficial for producers of honey to use the ½-lb. box.

There is another reason why bee-keepers should not adopt the ½-lb. box, as suggested. The bees have got to thin out more fdn., as more has to be used, and the bees have got to produce and use more wax, with an increase of labor, to seal over so many more thin combs; and lastly, the consumers of honey will not be benefited by eating the extra amount of indigestible wax that will be required in the make-up, and to inclose that ½-lb. package of honey, for which it is said there is more demand than supply; and who has created this demand, the honey-producer or the supply-dealer?

G. J. FLANSBURG.

Bethlehem Center, N. Y., Jan., 1883.

While I agree with you in the main, friend F., and do not yet see how ½-lb. sections can well be an advantage, yet I feel a little troubled to see the energy with which you and some of the rest of the brethren oppose it. It reminds me of the recent war on cheap queens. Then again, it striks me there is an air of uncharitableness, not quite becoming us as a people. Our consuming brethren are good people, and disposed to do right, I think, and I also think the supply-dealers are not altogether selfish, if you will excuse the remark coming from one in my position. As a rule, we are all of us working for the best general good, are we not? The greatest objection I have to any more kinds of sections (or any thing else, in fact), is, that it multiplies and confuses, until one can hardly see the end of what we have got to keep in stock, and got to furnish.

THAT HOUSE.

FRIEND MELLEN OFFERS SOME SUGGESTIONS.

THE great inquiry just now seems to be, What and how shall I build my honey-house, bee-house, etc.? Some years ago there was quite a fever on the subject, as many will recollect. Among others, I had it bad myself. Editor of GLEANINGS had it just like common men, only a *little* worse, if I remember aright. A good deal of ink was shed, pro and con, and discussions, more or less, in most of the bee-journals; but after a time the subject seemed to be dropped, as by mutual consent, and for some years but little interest has been manifested in the matter. I presume it has been with others as with myself—the fever, after all, never quite left me, and the chances of its breaking out anew with me, are imminent; I never felt quite satisfied to let the matter go by default, unsolved, where it was left. But now it looks as though it were coming to the front once more. It is a subject worth our consideration. At first in sitting down to write on the subject, one might not think it a difficult one; but it has as many paths, perhaps, as the frame question; hope it will come to as close a focus at the end.

We see, by the answer to calls from large apiarists for plans, estimates, etc., for such a house, that it is bringing out quite elaborate ones, as well as quite large and expensive estimates, which is all well enough, perhaps, in its way; but I fancy these plans do not and will not meet the wants of the average bee-keeper. Now let us take a look at the lay of the land, and see what we can make of it:—

I take it for granted, that most of us have tools, and a shop of some kind where we can make our hives, and do all the plain work necessary to the bee business. Now, this shop, nine times out of ten, is handy in some out-building—generally in the barn. Yes, and with no extra expense—jus' so! So we have got provided for the shop. Now, the bee and honey house that we were looking for a long time ago not materializing, we got tired of waiting, and so, like a great many others, built a honey-house 10x16 feet, for the purpose of storing honey and keeping all the bee-fixtures, such as extractor, sections, quilts, mats, and other things too numerous to mention, placing it among the hives just "where it would do the most good." Yes, I think I hear a good many of you saying, "I did just that thing:" So we have our honey-house.

And now we come, lastly, to our bee-house, or, rather, *bee-houses*. We would build them for the bees—bee-houses—just large enough for *them*, and room enough for *us* to work in with comfort—small and inexpensive, and yet good—made something after the plan of Oliver Foster's, in May GLEANINGS, 1882. We think this plan of a bee-house a step in the right direction, at least for a large portion of bee-keepers, say those having 75 stocks or less.

In conclusion, let me say, we seem to need three rooms, for we have at least three departments necessary, or in the business, whether it be a large or a small apiary. And now the question comes, Shall they all be under one roof, or shall they be separate? I take mine separate. Next. R. H. MELLEN.

Amboy, Ill., Jan. 10, 1883.

Seems to me, friend Mellen, you are still drifting toward the old house apiary, and I confess that I too have a strong leaning to it; but it has somehow always worked a great deal nicer theoretically than practically. I have tried a good many hands at it; but while I have no trouble in getting them to keep their hives nice and clean outside, it is almost always an untidy, sorry-looking place inside. I am a little afraid many of our nice honey-houses will also get to looking untidy after a little, if the good wife doesn't go in as a sort of "silent(?) partner" for the institution.

THE MAMMOTH RUSSIAN SUNFLOWER.

ALSO SOMETHING ABOUT SUNFLOWERS IN GENERAL.

AS sunflowers in many localities yield considerable honey, we have thought best to give the following, which a friend has sent us, clipped from the *Farming World:*—

There are forty varieties of the sunflower. Generally, the plant is not esteemed, but it has many valuable uses. It is cultivated in the south of Europe as a field crop. The Mammoth Russian sunflower is the largest, best, and most productive variety. I raised heads of it larger around than a half-bushel. They are, on the average, larger than a common water-pail. The seeds are very valuable for stock-feeding. Give horses a pint of seed in oats once a day; this will keep them fat. The leaves are valuable for cattle. The stems serve for fuel, and contain much potash. Sunflower seeds are the best egg-producing food known. They keep poultry in good condition, and largely increase the production of eggs. This plant should be grown by every poultry-breeder in the country, who has opportunity to raise only a few stalks, even for its properties in glossing the plumage of exhibition birds. For several years the seeds have been used in small quantities by breeders in fancy poultry as food for choice birds. They are mixed with other food, and the peculiar properties of the seed impart a beautiful gloss which no other grain gives to the plumage of adult birds. This plant grows very readily, and is a rank grower. It may be planted in any soil where other fruits and vegetables can not be conveniently raised—alongside of fences or wherever the soil is not easily cultivated. The flowers are double the dimensions of the South American varieties, and far exceed the latter as a bearer. A single head contains a larger quantity of seed. In southwestern Russia, near the Black Sea, the sunflower is universally cultivated in field and garden, and every part is turned to practical account. A hundred pounds of the seed yield forty pounds of oil, and the pressed residue forms a wholesome food for cattle, as do also the leaves and stalks when green, cut up when small, all being eagerly eaten. The fresh flowers when in bloom contain a large quantity of honey, and so prove an attraction for the bees. Large plantations in swamp places are a protection against intermittent fever. It is recommended in medical works, as a preventive of malarial fever. The seed can be raised as cheaply as corn, having yielded at the rate of one hundred bushels per acre. The sunflower possesses anti-malarial properties of much value. Directions for planting: Plow and harrow as for other grain; mark out with marker, drop by hand, put in plenty of seed so you can have a good stand, for grubs cut it down sometimes. Plants should not stand closer than four feet each way. Plow and keep free from weeds, and you will have seed enough to fatten your poultry, and produce an abundance of eggs for market. The time to plant is from the tenth of May to the first of July. I raise a large patch of the Mammoth Russian sunflower every year for my chickens, and they never have the chicken cholera.

We have raised the Mammoth Russian pretty largely, and are inclined to think all that is said about it in the above paper may be true; but with us, the bees worked on it very sparingly. We have an abundance of nice seed, which we can furnish at 20 cts. per lb. By mail, 38 cts. per lb.

VENTILATING THE HIVES FOR COMB HONEY.

FRIEND SAMPLE'S EXPERIMENT.

BEE culture in this part of Iowa, it seems to me, is badly slighted, so many farmers take so little interest in their bees. They nearly all stick to the old-fashioned log gum, or box hive, with sticks across, and each comb built in as tight as though they were nailed, and a big cap on top that will hold 30 or 40 lbs. (young bees thrown in). Good honey brings good prices here. Fair comb, 20 cts.; extracted, 18.

I want, if I can make it plain enough to give to all to whom it may be of value, my method of obtaining comb honey, and more particularly the way in which I ventilate my hives in the hot sultry weather in summer, so that no bees cluster outside. I use the Simplicity ten-frame hive for the brood. I use a honey-rack, both sides glassed, holding 28 one-pound sections. Now, the way I ventilate is this: Having put the bees into brood-chamber, I put on top of the frames, at each end of the hive, just over the metal rabbets, a slat ¼x⅞x16 in., placing the slat which goes on the end that the entrance is cut into, up close against the end of hive; the other slat or slats, furthest from the entrance. I place this other slat over the frames, leaving a crack ½ or ¾ inch wide between slat and end of hive, the whole width of hive; over this crack I place a strip of common wire screen (used for doors and windows), so the edge of screen will fit tight up against the end of hive, and the other edge lap on the slat; then set the honey-rack on, and every thing is bee-tight, and there will be a constant draft of fresh air through the hive from the entrance to the opposite upper end all the time; and in this way I can regulate the amount of air by simply moving the slat out or under the honey-rack.

As proof of the value of this kind of method in hot weather, I had one hive ventilated as above described last summer, which gave me over 150 lbs. of honey, while right beside it sat one old-fashioned box hive, tight all around, in which the bees didn't make one pound of surplus, and clustered out all over the front of the hive. C. J. SAMPLE.

Mount Sterling, Ia., Dec. 29, 1882.

Our friend Adam Grimm once wrote quite strongly in favor of ventilating for comb honey, but I believe his plan was simply using hives without bottom-boards. With the Simplicity hive we get all that can ever be wanted, by simply moving the hive forward on the bottom-board, and I hardly think any simpler way will ever be devised for ventilating for any purpose whatever. With the chaff hive we have ventilators in each end of the cover, and a wide entrance always open. As the hive-walls protect it from the direct rays of the sun, I have always thought this ventilation enough. I know bees will at times be driven out of their hives by excessive heat, and this is surely a great loss when it occurs in the midst of the honey-flow.

REPORT FROM MAINE.

ALSO SOME HINTS IN REGARD TO WINTERING.

SEEING so many reports in GLEANINGS from all parts, and not one from this part of the State, I have decided to run the risk of your putting me in Blasted Hopes. Now, I charge you, friend Root, not to put me in the above-named department, for my hopes are not blasted.

I commenced in the spring of 1882 with 26 stocks, all strong the first of April, and our hopes were never brighter; but the weather came off cold, and our bees held their own in numbers only by our feeding, and not until the last part of June did our bees increase much. We had the most extended bloom of white clover I have ever seen here, but it contained no honey; and not until goldenrod blossomed did we get any honey.

I increased from 26 to 73; sold $300 in bees, and $125 in queens, and have now 47 stocks left; not a pound of surplus did I get.

LANGSTROTH FRAME.

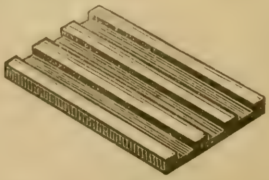
Down here in Maine our bee-keepers are crying out lustily for a standard frame, still holding on to the old-fogy notion that we must have a tall hive; and, what seems most strange, is that they should call for a tall hive, as though it were some new project, when, in fact, it is just what we have always had, and it has never given satisfaction, and it is the one great drawback in bee culture, this difference of opinion in regard to frames.

MAKING A TALL HIVE WITH THE L. FRAME.

Now, friend Root, I have an idea. I don't know but it has been advanced before; but if it has, I have not seen it. Can't you contrive some way whereby our friends who think they must have a tall hive can have one and still use the regular L. frame? Take your Simplicity two-story; set the frames on end, one end resting on the projection of frame on the bottom-board, with a piece put in crosswise of hive, on the bottom, for the other side of end to rest on; now put in division-board crosswise of the hives, reaching clear down through both stories; now make some arrangement to fasten the upper ends of frames, and they can put on a third story, and put in their chaff cushion, and have a hive all rigged for winter, and tall enough to suit any one, I should think, and still use the standard L. frame. JAMES B. MASON.

Mechanics Falls, Me., Dec. 27, 1882.

If you sold all those bees and queens, friend M., I should think you must have had at least some honey to do it with, unless you fed considerably.—The idea is old, of standing frames on end for winter, and I believe it was first given by Mr. Quinby. It has also been published in GLEANINGS, and the manner you mention, of putting them in a two-story Simplicity hive, so as not to need a chaff hive. Several friends have tried it, but I don't know now that I have had a report from them, after having tried it extensively. While writing, it occurs to me we now have a readier means of doing it than ever before. Let it be remembered, we now make our shipping nucleus hives for three frames, by nailing a very thin board on the sides of two of our regular spacing-boards, as shown below.



Of course, they are made so the three combs slide down into the proper grooves. For shipping, we cover both top and bottom with wire cloth, when the weather is warm. For wintering, we would let burlap take the place of wire cloth, perhaps. For an entrance, let the burlap project a little at one end. Put in three combs, and let them be those containing brood, if any such there be, when preparing for winter. Stand this three-frame case on end, in a two-story Simplicity hive, or chaff hive, as may be convenient, with the entrance fixed so it can not well get obstructed. Now pack your chaff all around, either loosely or with cushions. If fixed on a day when the bees can fly, you can shake them all down before the entrance, and they will go in of themselves. As the 3 frames are further apart than in summer, they will easily hold all the colony needs for winter, unless it is an extremely large one, and then you can use six combs instead of three. I am now quite sure I would rather have the stores in three combs, put a little further apart, than to have them in more. Our losses this winter have all been, apparently, from the bees getting over to one side, or one end, where there were no stores. As this plan would, as a general thing, have to be arranged for during warm weather, so as to feed up to fill the three combs, we can't very well test it this winter.

SIMPLICITY IN DETAILS.

HAS IT ANY THING TO DO WITH BEE CULTURE?

THE older I grow, the more I am impressed with the importance of having work so it consists of only a few plain simple details. We are, as a class, awkward and unwieldy; and when I say *we*, I mean humanity, myself included. In my early life I got scolded on almost every side, because I could not understand on the impulse of the moment, and I haven't got over it yet. If they would give me directions, plain and simple, in a book, I could sit down and study it out; and on this account I soon began to prefer our school textbooks to an oral teacher. The teachers, many of them, had no patience with my slowness and stupidity; but the books had all the patience in the world, and would keep still and let me take all the time I wanted. So I loved the books, and by and by astonished my teachers because I had mastered difficult things in the books, without being shown by any one. Well, I suspect there are lots of boys and girls like me who will get along very well if you give them time enough; and when they go to school we usually give them time, I believe, until time, if I am not mistaken, ofttimes hangs heavily on their hands. But it isn't convenient always to do this. There are times when we want them to act at once; and the great problem is, to make every thing so plain that they can act at once, without danger of making a mistake. Some errand must be done before a train goes out, and a failure or mistake in directions may result in the loss of much money or hard work, and possibly loss of life. A lady mentioned, a few days ago, in a temperance lecture, that she was once in a strange city, and wanted to find a certain place. She received directions from different people; but although they were all very kind and obliging, their directions were all based upon the supposition that she had some general knowledge of the city, which she had not; and so she wandered, until, in despair, she applied to a small boy. His bright young mind took in the situation of affairs at once, and he directed,—

"Why, missus, you just go till you come to a house with an iron fence around it, and that's the place."

If she didn't know any thing about Detroit she knew what an iron fence was, no matter where she lived; and thousands of times in our lives we want just such directions as the boy gave. Now the point is, to have our wits about us so we can always give directions as intelligibly as the boy did. I expect you will come back on me and say I do not give my answers to your letters of inquiry as plain as an "iron fence," by considerable, and I know they are not. The trouble is, we are getting so many iron fences, and every thing else, that even an old hand might wander helplessly if he didn't look out.

A friend has just written an article describing an outer shell to set over a Simplicity so as to make a chaff hive of it; or, in other words, to have a chaff hive so the inside could be lifted out and used as a summer hive. Now, although such an arrangement might be very handy, it would be complicating things so much more that I have thought best not to publish it, and so with hosts of new ideas. You may urge, that it will do no harm to let everybody describe his new inventions, and people can then use them or let them alone. Very true; but almost every thing of this kind I describe is ordered forthwith by some of our A B C scholars; and if I won't make it for them they get it made elsewhere; and then when it doesn't work, or fit in with plain directions I have given in the A B C book, they write me long letters of explanation, and want my advice. I am not complaining of this at all, mind you, for I want them to write and tell me all their troubles; but I complain of myself many times, because I have been so foolish as to publish so many new things to lead beginners out of the beaten path.

A little while ago we talked of grading the 1-lb. sections. Well, if everybody used them, and they were as staple as sugar and soap, I could easily do it; but if you push in on us with a ½-lb. section, I should have to grade them too; and by and by even our warehouse wouldn't hold them all. More than that, if it did, the clerks couldn't find what it was you were sending for; and worse still, I should soon have my money all locked up in such a chaos of "odd sizes" I should be in danger of becoming bankrupt. Who would want to learn bee culture when it gets to be worse than learning a new language? Even the Simplicity hive that I have fondly hoped would be the Simplicity for a century at least, has had to have its frames put crosswise as well as lengthwise; has had to have a new top and a new bottom; and now friend Hasty wants to put shirts on them. We must stop somewhere, or we shall all turn to chaff, and blow away. There is no trouble about bees paying, if we would manage them as simply as we did when we first commenced; for every number of GLEANINGS, and JUVENILE too, is full of accounts of the very great results that have been attained by almost new hands with only a few bees.

It costs us tremendously to change bee-feeders or queen-cages. We have to do expensive experimenting, get new tools and machinery for making them, get engravings for GLEANINGS and the price list, and finally take out and fill in for the A B C book. I tell you, brethren, I am going heavy on "sticking to the old way," and I am going to stop inventing new things, unless there is a very large prospect of some great improvement being made, by just giving a little "twist or turn" to something we have got already. Won't you go with me?

Ladies' Department.

IMPORTING QUEENS, ETC.

YOUR valuable magazine is at hand again, with its cheerful countenance shedding light on our whole household. Mr. M., our twin girls, and even baby Clayton, says, "Has DEANINGS tum?" How much we should like to see its editor! Can you not make us a visit some day? You know our *quondam* far-away Texas has, by steam power, been brought almost within the neighborhood of Ohio.

I determined last August that I would import some queens, and, noticing the advertisement of Mr. C. Bianconcini, I wrote to him in plain English to please forward them to me by Sept. 15. His answer was written in plain English, but evidently written by a foreigner, as his peculiar expressions bore the stamp of one not familiar with our language, and carried with them a charm peculiarly fascinating to me. For instance, he alluded to "the traveling expenses of the queens;" and in his second letter he stated, "All is against us. After the unpardonable negligence of the correspondent of Havre, we have the delay of the floods for the overflowing of the rivers." I just wondered, if I should try to write a letter in his language, if I could make myself understood as well as he did. No, I'll take that back. I didn't wonder; I only thought about it, and knew I couldn't.

Not knowing how U. S. money rates with them, I had them sent C. O. D. They came on the 26th of Oct., in miniature hives (little boxes about 4½x6 inches), made of white pine. A hole about ½ inch in diameter in each side and end, over which was tacked a piece of wire gauze, which, for want of a better name, I will call *jail windows*, admitted all the air the little fellows got. Two frames of comb were in each box, and at least ½ lb. of bees accompanied each queen. They were nearly all dead, and I was surprised to find the queens living; but they were strong and healthy. I made swarms for them by following the directions in A B C for beginners, and in a few days most of the sealed brood had hatched, and I had a respectable colony of bees with each queen.

WATER FOR BEES.

And now permit me to ask a question or two. Has it been demonstrated, that bees can live without water? The first queen I ever bought came in a cage that contained a small vial of water, with a sponge in the mouth, instead of cork. The bees were all perfectly healthy in that cage. Since then I have bought in all nearly 60 queens, and no provision for water was made in any cage. In nearly every one there were at least one or two dead bees, and in some there were more. I did not much wonder that they could come safely to Texas from almost any part of the United States without taking a drink of water on the way. I believe I could do that myself, though I should not like it much. But to start the little fellows clear across the Atlantic, without one drop to quench their thirst, I must confess I think borders on cruelty. The only wonder to me is, that the queens did not die too, and I no longer think it strange that imported queens cost so much.

DRONE-LAYERS.

In your comment on my last, you ask if the queen to which I alluded was a drone-layer. I am inclined to think she was, when these drones were raised; but your question implies that the opinion prevails, that a drone-layer is never of any account. She certainly was one of the best queens I ever had, for two months, when I lost her in extracting. I am only an A B C scholar in its truest sense, and I may be coming in contact with the opinions of experienced bee-keepers; if so, I beg their pardon. I can but make a simple statement of facts; and with all the respect that is due them, I take my place at the foot of the class. MRS. A. C. MOSHER.

San Marcos, Texas, Jan. 12, 1883.

I am glad to know you succeeded with your imported queens, my friend; but why do you not tell us how many you imported; what they cost, and how many were dead? If you lost none in transit, you did better than most of us.—I believe it is generally conceded, that the amount of water in sealed liquid honey is enough to sustain the life of the bees, and many think perhaps it is all they care for. The difficulty of having water where they can get it, always pure and sweet, without any danger of wetting them, is still somewhat an unsolved problem. You know the bees seem to go all right with the Good candy, and that is *dry sugar* wet up with honey.—The only reason we have for thinking drone-layers are never of any account, my friend, is, that drone-layers, in the usual acceptation of the term, never lay worker eggs at all. If your queen first laid a frame full of drone brood, and after that laid worker eggs, she was certainly an unusual queen.

FROM 5 TO 27, AND 200 LBS. OF HONEY.

I had only five swarms in the spring to start with, and as I was in the A B C class I divided them until I had 14 good swarms, and then I thought they would not swarm any more; but in August they commenced swarming, and they just made the air hum. I kept putting them back, and sometimes they would stay, and sometimes they would not; and then I would give them a new hive. The last swarm came out Sept. 5, and now I have 27 good colonies in good condition for winter. I got nearly 200 lbs. of surplus honey. They made me lots of work. I had no one to help me, and I had all the housework on a large farm to do. I tell you it kept me busy. My queens are all Italians, for I raised them.

MRS. M. A. WILKINS.

Seneca, Nemaha Co., Kan., Dec. 11, 1882.

You certainly did well, Mrs.W., considering that you had so much housework to do. If you accomplished all your work, at the same time caring for your bees, then assuredly those of your sex who have nothing but the bees to care for can not make the plea that, to work with the bees is too hard. It is rather unusual for bees to swarm so late in the season.

I take great pleasure in my bees, and feel well repaid for all I have ever invested. Only five swarms of black bees in the spring; have sold honey to the amount of $46.50, besides giving and using quite a quantity, and three very large new swarms. Honey sold mostly for 16 cents. As I do not see any very good report from this State, I am satisfied.

MRS. E. M. CROSMANS.

Batavia, N. Y., Dec. 15, 1882.

Heads of Grain,
From Different Fields.

SUGGESTIONS ON FOOT-POWER SAWS.

TELL friend W. Z. Hutchinson to put his driving-belt on a rim built on the side of his driving-wheel, so as get the weight of the wheel outside of the belt. I at first had the belt of my foot-power saw on the outside of my driving-wheel; but an old mill-wright told me to fasten a rim about four inches from the face of the wheel, and I find it much better; the belt doesn't have to be so tight, and I get a better grip on the mandrel-pulley. I lose some speed to the saw, but I can feed faster, and the belt doesn't slip. G. LUFF.

Salt Lake City, Utah, Dec. 14, 1882.

Thanks, friend L.; but I would suggest that perhaps in your case you had more speed than was best, for the kind of work you were doing. With one of the Barnes hand-rippers we found we could get excellent results with very heavy hard plank, by putting the crank right on to the other end of the saw-arbor. It was then virtually cutting direct on the stuff, almost as a man would with a hand-saw, only that there was no drawing back, and the stuff was cut exact. It may be, too, that yours was an iron balance-wheel, and it is well known that a belt works better on a wood surface than on iron. Aside from the above two points, I presume it is true that we shall get better results by having the main weight of the balance-wheel outside of the rim of the pulley that carries the belt.

ONE AND ONE-HALF-INCH SECTIONS, WHEN NO SEPARATORS ARE USED.

I started with 20 swarms in the spring; increased to 50 by natural swarming; took 2000 lbs. of honey in one-pound sections, or, rather, in sections 4¼x4¼, about 800 of which were two inches wide; and as I was experimenting for honey without separators, the remainder were in sections 1¾ and 1½ inches wide. The result is, that I never want any more sections over 1½ inches wide, if they are to be used without separators, as there will be ten of the two-inch sections, to one of the 1½-inch that will be bulged; in fact, out of 800 sections 1½ inches wide I did not have half a dozen that would not pack in the shipping-cases without any trouble; while of the 2-inch sections there were ten times as many. And another thing: I find that my 1½-inch sections will be filled out nice and full, while the 2-inch sections will be but poorly filled. This being the result, I have about come to the conclusion to use only 1½-inch sections after this, without separators; this will make the sections enough narrower so that we can get two more frames in a hive. I should like to have others try the narrow sections without separators next season, and report.

FOUNDATION TO FILL THE SECTIONS.

I fill my sections about half full of the thinnest fdn. that I can get. I use the thin veneering, or fruit-box sections, that cost 75 cts. per 1000 in the flat; I have used them for the last three years; have shipped nearly all my honey to Chicago, and not lost a single section by being broken. My honey has sold for from 18 to 22 cts. per lb. But I have spun this out too long already; so I will close by wishing you God speed in every good word and work.

WM. L. KING.

Sodus, Berrien Co., Mich., Jan. 8, 1883.

Not at all long, friend K., so long as you are discussing vital points like these. Friend Muth has for years advocated the 1½-in. sections, used without separators; and, if I am correct, friend Heddon is following pretty vehemently in the same wake. I am glad to know you like filling the sections with fdn. —Will you please tell us where you get veneer sections for 75c. per 1000? And do you have entrances for the bees cut in them for this price, or do you put them in the hives a little way apart?

A HANDY TABLE FOR THE HONEY-HOUSE.

While the subject of honey-houses is before us, please allow me to describe the table I use in mine. It is circular, 4 ft. in diameter, made of 1¼-in. pine boards. It is 2 ft. 5 in. high; the shaft, or standard upon which the table turns, is 4x4 in., made of white oak. Any stiff scantling that will remain straight will do. The table is well braced on the under side; but the braces do not come so near the edge of the table that they come in contact with the knees when we are sitting up to it and turning it. The shaft has a ½-inch iron pin in the bottom end, which goes through the floor with a piece of leather between it and the floor. This should have a little tallow once a year. The top end of the shaft is round, and goes through a hole made in a board that is fastened overhead. Now for the use of it: We fill the table with empty jars, cans, or pails, as the case may require, then fill all that can be reached conveniently. We then give the table a gentle pull, and with one motion, easily performed, requiring only a moment's time, we remove the filled ones and bring as many more empty ones right in their place, and so on until all are filled. About one foot above this table should be a smaller one, say 18 inches in diameter, upon which to put labels, etc. When the contents of the table are all filled, we just turn around, placing our feet under the table, and proceed to cover and label, turning the table as occasion may require it, until all are ready for packing for market. We then clear the table, and commence again. When we are crowded for time, one fills, another puts on the covers, while a third labels.

I regret that you still continue to write up blue thistle. To my mind, it is a grievous sin againt humanity. Time will tell.

Bees are doing well so far. S. T. PETTIT.

Belmont, Ont., Can., Jan. 12, 1883.

Thanks for your description of the revolving honey-table, friend Pettit; but I waited anxiously all through it to hear you say you had a place fixed to roll up a barrel so a honey-gate would deliver the honey right into the cans, as you turned them one after another right under it; or do you pour the honey out of a coffee-pot or pitcher, strainer pail, or something of the sort? I am not yet convinced the blue thistle in our garden will do any more harm than a stalk of its near relative, borage.

A SHEET OF GLASS AS A HINDRANCE TO ROBBERS.

Reduce the entrance so but few bees can pass; then lean over the entrance a window-glass 8x10; and if there is any fight in your bees they will stop it. They will make a grab for the robber if he comes behind the glass. He dodges back and hits the glass; is confused, and keeps trying to get out and up the glass, and out at one side or the other. This will stop robbing, if there is any resistance shown at all. Try this, and don't you forget it.

Salem, Ind., Jan. 11, 1883. JOHN CRAYCRAFT.

The "glass" idea is old, and as you say, friend C., "when there is any fight in them" it will almost always stop it; but when a colony won't fight at all, it is of but little avail, until we give them some unsealed brood, or something to *defend*. Get the *inside* of the hive right first, and then these aids are a help.

KEEPING HONEY TO ACCOMMODATE CUSTOMERS, THE YEAR ROUND.

I will send in my report for 1882. I had 36 colonies in spring; got 1500 lbs. of comb, and 900 lbs. of extracted honey. I increased to 69 colonies; honey all sold at 20 and 25 cts. I sold my extracted honey for 20 cts., and still they come for honey. I should be glad if I had 1000 lbs. more to sell, for I hate to tell those cheerful-looking ladies, when they come after honey, that I can not spare it. I thought it would increase our sales of honey to keep it in stock the year round. J. R. LINDLEY.

Georgetown, Vermillion Co., Ill., Jan. 7, 1883.

To be sure, it will pay, friend L. People don't have very much of an idea of a bee-man, if he doesn't *always* have honey.

AN APIARY OF 295 COLONIES.

The spring of 1882 found me with 175 colonies of bees, having passed the winter without losing a single colony, and all out-doors, and with the exception of 22 Italians, all were blacks. I raised a little over 200 lbs. comb honey, to supply a few "fine-haired" people in my own town, at 25 cts. per lb. All the rest was extracted. I got 13,000 lbs. and a little over; increased the bees to 295; am wintering all outdoors on their summer stands. I have sold about half of my honey at 10 to 12½ cts. per lb.; I have the remainder yet on hand.

A HOME MARKET WORTH SOMETHING.

My home market will take from 10,000 to 12,000 lbs. I am thinking of enlarging my bee business, if I can find pasture for them. I can handle 500 or more colonies. I raise nearly all extracted honey.

HIGH RATES ON SHIPPING LIQUID HONEY.

I shall have to ship off considerable honey. I find one thing about shipping extracted honey that is wrong; viz., the freight on honey from here to Chicago is 65 cts. per 100 lbs.; on syrup and molasses, 41 cts.—24 cts. difference on 100 lbs., and in the same proportion to other places. The fact, as it appears to me, is, the railroad managers have made their freight on honey, as *comb honey*, the most delicate and frail thing there is, almost, to ship, while extracted honey is a new enterprise, comparatively, and to this difference they have not had their attention called in particular.

Now, I think if our large bee conventions would appoint a committee to talk with the railroad managers about it, that this thing could be made right, and freight on extracted honey, in barrels be made the same as syrup and molasses. This extra freight must come out of the consumers, and will debar a great many from using it. I hope others will look after this matter, and try to get it as it should be. I think it can be done, and would be a great help in selling our honey. The railroad men are not so very unreasonable. As a rule they will do the fair thing, if we approach them in a friendly manner, when they have time to attend to us. Honey can be shipped as syrup, but it doesn't look just right, does it? EDWIN FRANCE.

Platteville, Grant Co., Wis.

I should think 10,000 or 12,000 lbs. a pretty big home market, friend F., unless, indeed, you go to all the large cities around you.—This matter of rates of freight on honey is indeed one that needs looking into. A few years ago they classed all bee-hives as double first-class, even when in the flat; and even now there are some roads that will coolly put on this enormous rate, and say all bee-hives in any shape are classed so. Since the matter has become understood, that bee-hives are no longer great bulky frail structures, with glass "drawers" in them, we have, with most roads, a respectable rate of third class for hives in the flat. If they have the idea, as you suggest, that all honey is a "breakable," we ought surely to have it righted. It occurs to me, however, that syrups are generally shipped from large cities only, where merchants have low rates to all small towns, and that honey is shipped only by the farmers, to cities and towns, so it can not go at the regular rates of syrups from the cities, but must go at a local rate. Will the Thurbers please tell us if they can ship honey as cheaply as they do syrups to their customers? If not, we will surely have our conventions take it up.

CELLARS MADE OF CONCRETE.

Yes, our cellar is made of concrete, such as friend Savage describes on page 24, except that we used nothing but sand and gravel from the lake shore, and large stones from the field. We used water-lime, or cement, except for about 16 inches that is above ground. I think it is the best cellar I ever saw. Our bees wintered in it last winter without loss, and a part of them this winter, and they are doing well. It is the cheapest way a building can be made, where there is plenty of material at hand, and it can be made to look as well as any brick or stone building ever made. We used one bushel of cement to three of sand, three of fine gravel, three of coarse gravel, and as many large stones as we could work in. Holy-Lands are the best. ILA MICHENER.

Low Banks, Ont., Can., Jan. 10, 1883.

BUYING HIVES WITH A "PATENT," ETC.

In the spring of 1881 I bought one swarm of black bees; have taken during the whole year about 15 lbs. of comb honey, no increase. The industry of the little creatures, and the sweet of the honey for my children, made me interested. In the fall I bought another swarm of black bees in a patent hive (with patent) for $12.50. Knowing nothing about scientific bee-keeping, I thought I had a little fortune on my wagon. The secret was all in the patent moth-trap attached. To-day the hive is placed in a corner, and is for sale at $1.00, *with patent*. My bees are transferred to a Simplicity hive. In the spring of 1882 I bought one more swarm, in box hive, for $3.00. This made me three swarms to commence with. Then I bought the Simplicity hive, and a friend let me have a copy of GLEANINGS and his A B C. I saw the value of them, and ordered both. By their help I increased from 3 to 15 by natural and artificial swarming; 3 ran away; cause, press of farmwork. All are in fine trim, in Simplicity hives. I have Italian queens, partly bought and partly my own raising. I introduced 12 queens for others and myself, and have not lost a single one. Some cross swarms of them tried my patience for eight days, but I was glad to get the queen at last. I sold $20.00 worth of honey, and my family have sufficient to last till spring. I myself am now an enthusiastic A B C scholar.

I know, friend Root, that you have received many better reports; but mine is so satisfactory to me, especially if I take the year before in comparison, that I feel myself under obligation to Dr. Lay, of Hallettsville, for first calling my attention to A B C and GLEANINGS, and for much kind advice, and especially to you and other writers for spreading the knowledge of modern bee-keeping. A. MEYER.

Sweet Home, Lavaca Co., Texas, Jan., 1883.

Thanks, friend M., for your kind letter, and I wish you would tell Dr. Lay we should be very glad to get a line from him; for after hearing him talk at the Cincinnati convention, we feel sure he could entertain as well as enlighten the "brethren."

A MILLER AND ROACH EXTERMINATOR.

Yes, sir; and a complete success every time. I know that, whenever a man mentions a moth-trap, bee-men are ready to cry "humbug," "put him out," etc. I will say to all who are not acquainted with my method, hold on, as I will give you something very valuable, but not patented. Well, here it is: Inclose your apiary with a close fence, and then keep as many ducks as bee-hives (mine are mallards). My word for it, during the season of the year that the millers and roaches bother your hives, your ducks will work for you every night as long as they can see, catching millers and roaches. But they will never touch a bee. I call your attention to the profitableness of this moth and roach exterminator. Try it and you will be pleased.

WHERE WILL OUR FRIEND FIND THE BEST PLACE TO KEEP BEES?

As this is not a good locality for honey, I want to ask the readers of GLEANINGS if any of them can direct me to a first-class place to locate an apiary and hennery. I wish to run about 200 stands of bees, and keep from 500 to 1000 chickens. I should like to locate near a good market for fowls. To any one who will point out such a location I shall be under lasting obligation. Mr. Editor, have you not some place to call my attention to? A. L. FOREMAN.

Milton, Ill., Jan. 8, 1883.

Thanks, friend F.; but while reading of your remedy, I got to wondering if I was sure I wouldn't rather have moths than ducks, if I must have one or the other in the apiary; but perhaps many of the brethren would rather have ducks, and I am pretty sure they would "*oust*" the moths, after they once got the trick learned.—In regard to a location, I might advise you to open a ranche beside some of our Western friends, Oatman, Miller, the Dadants, and others who have made such immense yields this past season; but if I did, next year they might all have a failure, and then you might blame me. To tell the truth, after reading the reports so many years I am very much at a loss to say where is the best place. Sometimes it is here, and again it is there; and in the end it seems to be where we have the most enterprising men located. Why not go and settle down by Doolittle? If you shouldn't find his locality so much superior, you could doubtless learn how of him, and that would eventually amount to the same thing. Then comes the question, couldn't you do it cheaper, and stay where you are? I am inclined to think you could.

BEES IN WYOMING TERRITORY.

Last spring I brought the first honey-bees to Wyoming Territory that were ever tried in this new and wild region. People have heretofore supposed that no honey could be made here, on account of the short seasons and nothing but wild flowers to gather it from; but my two stands of bees did remarkably well; in fact, as well as I ever saw them do in Wisconsin, and they are all right up to this date. They filled several boxes full of splendid surplus honey, and worked well till the first of October; and when I had occasion to move them, it was all two men could do to lift each hive into a wagon, so great was the weight. I did not divide, but think I lost some natural swarms. G. G. MEAD.

Rawlins, Wyoming, Jan. 12, 1883.

AT HOW LOW A TEMPERATURE WILL OR CAN BEES FLY?

A few nights ago we had a light fall of snow; the next day I took the broom and my hook to clear the snow away. I hooked into one gum to haul out (at the entrance) the snow and dead bees, if any, when, behold, out came 2 or 3 dozen bees, and flew off quite a distance, and circled around, and went back in the hive, and only one fell on the snow, that I could see, and that I helped in the hive. It was still and clear, and I stepped to the tree where the mercury was, and it was just 10° above zero, and no mistake. I was surprised. JOHN W. C. GRAY.

Atwood, Piatt Co., Ill., Jan. 14, 1883.

FLAX STRAW AS A SUBSTITUTE FOR CHAFF, ETC.

In the fall of 1881 I packed four good strong colonies in flax husks, taken from the flax while scutching. I believe this is one of if not *the* best absorbents we have in Canada, and mice or other vermin will not work in it; packed similar to friend Jones's plan. All came out strong in the spring. One lost their queen (mentioned in July GLEANINGS); though I tried hard to get a queen early for them, it was late before I succeeded, and my strong colony was reduced, so that I had only three to get honey from. However, I was favored with about 160 lbs. of beautiful comb honey in 1 and 1¼ lb. sections, which I succeeded in getting first prize for at our fall fair. I also increased to nine. One swarm that issued on June 27, made in 1¼ sections over 40 lbs. This is the best I ever heard of around here for a first swarm. I bought one swarm, so now I have 10 nicely packed in flax chaff and dry sawdust, and all furnished with young queens. All are Italians, except one Holy-Land queen. WM. HASTY.

Brussells, Ont., Can., Dec. 18, 1882.

TWO VARIETIES OF NATIVE BEES IN MISSISSIPPI.

We have two varieties of the common bees in this section of country—one small, dark, and extremely cross; the other, larger and yellower, and better natured. I found a tree of the latter variety this past summer, from which I obtained about 30 lbs. of honey, very white and well flavored. I succeeded in saving the bees, and am feeding them this winter, which is considerable trouble, as they are in a common square hive. I feed them with best sugar dissolved in water, which I place in a saucer, and spread a cloth over it. In a warm day they will empty the saucer in about two hours. They will not eat sorghum or N. O. molasses, to do any good.

Soft-maples bloom here the last of January or first of February; we have had a steady succession of fruit-blooms from that time until the last of March.

HONEY-DEW.

Sometimes the honey-dew is 1-16 of an inch deep on the leaves; when this is the case the bees gather honey very rapidly. C. G. BLAKSLIE.

Pine Grove, Benton Co., Miss., Dec. 27, 1882.

I wish, friend B., you would send me bees of both these varieties in a cage, if you are sure the larger ones you speak of are not Italians. From your description I should think they might be, and it would be nothing strange if the Italian blood had by this time made its way through the forest for hundreds and possibly a thousand miles. Bees will never eat poor sugar or molasses, when they have access to something better.

THE PERFORATED ZINC HONEY-BOARDS, ETC.

That zinc honey-board, on page 10, in GLEANINGS of this month, suggests to me that, if sections were put as close to each other as the holes are wide, they would make a "queen-excluder." How wide are the holes in the zinc? Is it put on close to the lower frames? Have those that have used it found no combs between it and upper story? John Myers (page 35) reports that Heddon's honey-board answers as well for sections. What is the width of the holes in the board he used? I think of trying the zinc.

Hartstown, Pa., Jan. 10, 1883. P. MOYER.

The holes in the zinc are 11-64 of an inch wide. It would not be possible to make holes in wood sufficiently exact for this purpose. We put it on close to the lower frames. All who have used it say no combs are bridged over it. The spaces in Heddon's honey-board are about ⅜ in.

FOUNDATION-MILLS; QUERIES.

Do your 12-inch mills work as well as your 10-inch? Would the 10-inch make fdn. that would answer for Gallup frames? Does yours make perfect sheets of fdn. to outside of rolls, or, in other words, does a 10-inch mill make fdn. that width? How many pounds would be an ordinary day's work? Does it require much experience to make good sheets? I examined 24 stands of bees yesterday and all are in good order, packed in chaff hives and in sawdust. J. S.

Morpeth, Ont., Can., Jan. 19, 1883.

The 12-in. mill will make just as good fdn., unless it be a little more difficult to make very thin on it. It runs easier than the 10-inch mills, because it is back-geared, as you will see in the cut; but it runs out the fdn. so much slower, that a 10-inch mill, not back-geared, is preferable by far, for making fdn. that will work nicely in it. Any mill will make sheets the full width of the rolls, but it is so difficult to keep the sheets running straight, where you make them full width of the rolls, that it is hardly practicable. It is for this reason we decided on a 10-inch mill, instead of 9, for making sheets for the L. frame, 8½ inches wide, or thereabouts. Two good smart hands should make 200 lbs. of brood fdn. in a day, and perhaps half as much for sections. Any one ought to make good fdn. the first day; but of course they will make better work, and faster, with more practice. A 10-inch mill would answer for Gallup frames, but 12-inch would be preferable, for the reasons I have given.

FROM 4 TO 13, AND 300 LBS. OF HONEY.

My bees did well, I think, for a beginner. I commenced the spring of 1882 with two old colonies and two new swarms that I bought in the spring, and increased to 12, and got over 300 lbs. of comb honey, without disturbing lower stores. I am wintering on summer stands, part in double-walled hives, and part in single hives, without chaff or cushions. I will report in the spring, and perhaps apply for space in Blasted Hopes. I like to work with the bees, but they always would, and I think always will sting me. I think you should be a little careful how you advise your patrons to work with the little pets without veil or gloves. Perhaps you don't know how they get punished. A. LIVINGSTON.

McVey, Ill., Jan. 8, 1883.

GOOD REPORT FROM HYBRIDS AGAIN.

My 12 swarms of hybrids, brought from Illinois last spring, increased to 30, all in fine condition now. I moved them the 6th of this month about ¾ of a mile to my little farm. They yielded 1600 lbs. of the very best of white-clover, smartweed, and yellow Spanish-needle comb honey. The smallest swarm I hived weighed 3½ lbs.; the largest, 10¾ lbs. The latter issued August 27, from a colony hived July 1 (same season); gave 21 lbs. surplus. I was overtaxed with work, as it was my first season here, or I could give a better report. WM. S. ROBERTSON.

Brookfield, Mo., Jan. 8, 1883.

I wrote you some time ago, as you are the Secretary of the National Bee Convention, to try to find out who was appointed vice-president for Maine. I see it was A. G. Mason. You wrote me it was intended for myself; if that is the case, will you be so kind as to make the correction in GLEANINGS. I feel interested, as I wish to have the State of Maine represented next fall, and do not want to interfere with another man's business, as it might make hard feelings. If there is such a man as A. G. Mason.

JAMES B. MASON.

Mechanics Falls, Me., Jan. 12, 1882.

If there is an A. G. Mason in Maine, will he please "stand up"? I always knew I wouldn't be a good Secretary.

CONCRETE FOR A HONEY-HOUSE.

I see D. F. Savage favors concrete buildings. I know a little about them; they are almost sure to be damp. They are also very cool in summer — too much so, I think, for ripening honey. The first objection may be partly overcome by thorough ventilation. My first winter's experience in teaching school was in a house of this description, and the people said it had never been comfortable in the winter, the walls being covered with frost all through the season. I got some tools and fixed the windows so I could let them down at the top; then I lowered them about six inches every night after school, and left them until morning. Although the winter was a very severe one, we had but little frost on the walls of our schoolroom. One night, however, we had the worst "blizzard" I ever experienced, and I took out about 12 pailfuls of snow the next morning.

BURDETT HASSETT.

Howard Center, Ia., Jan. 8, 1883.

Many thanks, friend H., for the very valuable facts you have given us. Brick buildings are now made to overcome this objectionable feature by making the wall hollow, and this is the way our dwelling-house is made. It is as dry as any frame building.

FROM 30 TO 53, AND 4700 LBS. OF HONEY, BY A "SELF-MADE" BEE-MAN.

The 1st of June, 1882, found us with bees in 30 hives. Nearly half of them were one, two, three, and four frame nuclei. We increased to 53 colonies, with abundant stores for winter, and obtained 4700 lbs. of honey; 1097 lbs. of it was comb, the rest extracted. I make all my own hives, frames, and sections; and all the tools I have are two saws (one rip and one cross-cut), two planes, hammers, square, thumb-gauge, scratch-awl, and a work-bench. I paint my own hives; in fact, I have done all the work of my apiary, except the assistance of a young man one day; and my wife nailed about 500 sections for me.

The honey of every hive was weighed separately, and that, too, on a balance with only 16 lbs. of weights, so that most of the time but two combs could be weighed at a time. A record was kept of every hive, and the amount of comb and extracted honey credited. The extracting was done with an extractor of my own construction, made of inch pine lumber, for 2 frames (Langstroth). It holds 65 lbs. of honey below the rack, and is not so "awful big" either, as one of my neighbors carried it on his shoulder over half a mile, extracted the honey from his hives, and carried it home again twice during the season.

S. A. SHUCK.

Bryant, Ill., Jan. 12, 1883.

Why, friend Shuck, you are a "trooper," a regular self-made bee-keeper, and one who makes his way independently of supply-dealers, or any other kind of chaps who so harrass and distress those who depend on buying every thing. I don't believe you have a farm on your hands, or much other business, do you? Please tell us how much you got from your best colony, if you kept it all weighed so carefully. In short, we should like to know all about how you do it, if you will be so kind. Many thanks for items already given.

WOOD SEPARATORS; A WORD IN FAVOR OF THEM.

I would add my testimony in favor of wood separators. I have used tin, and do not see that there is a whit more liability to attach comb to the wood. Now, the question is open again as to discarding separators entirely. My advice is to go slow in that direction. Who that has tried it has not had his patience tried also in casing it for market? If certain conditions are carefully observed — to put in full combs or sheets of fdn., and to keep them exactly perpendicular in hive, most of the sections will crate well enough; but I have never known them to be invariably so.

HONEY-ROOM.

I built last summer a storeroom for the purpose of ripening as well as storing my honey, which pleases me so well, and was so easily put up, that I will describe it. It is 8x12 feet, with single-pitch roof, but nearly flat; 7½ feet high in lower side, and 8½ on upper, with close sheathing, and tin roof on that. It is planked up and down and battened, and lined on the inside with building-paper. A strip of tarred paper or roofing-felt at bottom, is held in place by a strip all around next to floor as a protection against insects; a tight floor, tongued and grooved. There are no timbers about it, except stout sleepers fastened at the ends into others like them, 2x8 in., with spikes, all resting in solid foundation. I stored 4000 lbs. in this, and believe I could have put in double, and I have never had honey keep so well in comb, nor so well ripened extracted. There is one window with wire screen outside, running up 10 inches above window, to let bees out. A screen door outside is needed to enable one to work at all in warm days inside. There are no insects to bother, and no shelter for mice; warm and dry, and cheaply built. It is too small for an extracting-room, which I had already, but it is preferable to have the honey stored in a room used for nothing else. It would be well to have it longer, say 8x20, with extracting-room at one end, with 2 windows in that part.

J. W. PORTER.

Charlottesville, Va., Dec. 25, 1882.

The following is taken from the proceedings of the Western Bee-Keepers' Association, held at Independence, Mo., Dec. 23, 1882:—

HALF-POUND SECTIONS.

Mr. Salisbury stated that the tendency, especially in the East, was for smaller packages of comb honey weighing not more than one-half pound, as having a ready sale at a higher price, and more satisfactory for general use.

L. W. Baldwin thought that one-pound packages were small enough for practical use, as the change of apparatus, etc., of the apiary for procuring comb honey in smaller sections would be accompanied with great expense. He stated that he had sold his crop of comb honey the present year, put up in 1¾-pound sections, at 23 cents per pound in the Kansas City market.

REPORTS.

There were represented at the association about one thousand colonies of Italian bees and 26,000 lbs. of honey, distributed among the different members as follows:

NAMES.	No. of Colonies in spring.	No. of Colonies in fall.	Ext'd Honey in pounds.	Comb Honey in pounds.	MODE OF WINTERING.
Jas. A. Nelson...	47	63	700		
J. D. Meador...	25	55	1000		On summer stands.
C. M. Crandall..	52	73	1200	1000	On summer stands.
S. D. Gregg....	34	50	1200		On summer stands.
F. J. Farr........	95	146	1500	4000	In cellar.
J. H. Jones......	40	105	700	2000	In cellar.
L. W. Baldwin.	150	207	2825	3175	In cellar.
P. Baldwin......	130	145	900	4000	On summer stands.
S. W. Salisbury	64	100	2000	500	On summer stands.
E. M. Hayhurst.		110			Principally engaged in the queen-rearing business.
Total........	637	1054	12025	14675	

The association invites all bee-keepers within reasonable distance to join or attend its meetings, and help in bringing the bee-keeping interest more generally before the public, advance the production, and extend the markets of its products. It also extends an invitation to all ladies interested in any way in bee culture to be present and take part in the discussions of the association.

WHO IS JULIA?

In our Jan. No. I asked friend White who "Julia" was, to which he replied as follows:—

Yes, Bertha and Daisy are intimately acquainted with Julia. She is not a bee-woman, but a honey-woman — at least, she is the sweetest woman *I* ever saw, and I *know* she is composed of something sweet. I don't think she is flavored quite as highly as clover and linden honey. I guess the "wheat-stubble" honey explains it. **DAN WHITE.**

New London, O., Jan., 1883.

A SUGGESTION FOR THE REMINDERY FOR FEB.

If you have your bees on 6 combs about the first of February, you will find the bees at the top of the frames under the Hill device, if you use one. Now comes the trouble. If the weather sets in cold for ten days or two weeks, so that the bees can't spread out, they will be compelled to eat pollen, and then comes dysentery. Now, to prevent this dysentery, the first warm day in February you should go over all your hives and give them a comb of sealed honey; and if it is too cold to handle them, cut a comb from a frame, and place it under the Hill device, on three small sticks, and see how soon the bees will find it. If you have no sealed honey, make syrup from the best sugar, and put in a shallow pan, and cover them up warm, and see how the dysentery will disappear. Bees are wintering all right.

Oakley, Ia., Jan. 16, 1883. **WM. MALONE.**

BLUE THISTLE.

Division Grange, No. 1, situated in London, Ontario, D. C., in discussing the introduction of various weeds as honey-plants, apprehends great danger to the farming community from the introduction, for that purpose, of the blue thistle (*Echium vulgare*), and the following resolution passed: Moved by J. M. Kaiser, Sec., by J. K. Little, that this Grange learns with alarm and regret that certain bee-keepers, especially A. I. Root, of Medina, Ohio, advocates, through GLEANINGS IN BEE CULTURE, of which journal he is publisher, the cultivation of noxious weeds as honey-plants, particularly the blue thistle; and he is hereby respectfully requested to do so no more. It was further resolved, that a copy of the above resolution be sent to Mr. Root, with a request that he insert it in GLEANINGS. Hoping that you will comply with the above request, I remain yours respectfully,— **J. M. KAISER, Sec'y L. D. G.**

Raper, Ont., Can., Jan. 18, 1883.

My good friends, I have never advised anybody to plant blue thistle, that I know of, and I have only one plant in my garden, after trying three or four years to get it to grow.

THE A B C "CHILD" THAT GREW SO FAST, STILL ALIVE AND STILL A BEE-MAN.

I have just disposed of the last of this year's crop of honey, 4500 lbs., at 20 cts. cash, and now must look around me for a start for the coming season. I am the A B C child that grew so fast; and the more I know, the less I write of the secrets of bee-keeping, and I think this is the way with all. When we have 5 to 20 hives, we write every thing we learn, which must be tedious reading for older bee-men; after we get among the hundreds we keep silent. You predicted at first that I would give up the business, being too enthusiastic; but not so. I have made a success of it, and am now a specialist, having dropped all other pursuits. I have found the great secret in obtaining large yields of honey is in hiving swarms properly. The best plans and most successful manipulation have never appeared in print.

Arcadia, Wis., Dec. 26, 1882. **E. A. MORGAN.**

Glad to see you again, "child;" but I don't quite see how I can agree with your last observation. If I am correctly informed, it is not necessary to have any natural swarming at all, in order to get the best results. In fact, we have been told the way to get enormous crops of honey is to keep down the swarming fever entirely, by the use of the extractor.

FROM 45 TO 64, AND 11,135 LBS. OF HONEY; 248 LBS. PER HIVE ON AN AVERAGE.

The season of 1882 was the best for honey here for the last ten years; 100 lbs. per hive, spring count, I have thought a good yield. My average per hive, spring count, was 248 lbs.

No. of hives in fall of 1881 was 45; in spring of 1882, 45; in fall of 1882, 64. Sold 11 swarms as they swarmed; had 3710 lbs. comb honey; 7425 lbs. extracted honey, or 11,135 lbs. in all.

My bees are all in Quinby or Simplicity hives; 23 in chaff hives; I am going to put them all in chaff hives, as I have not yet lost one in such.

JAMES H. COX & SONS.

Hudson, Ill., Jan. 19, 1883.

Why, friend Cox, we shall soon be ready to hear almost any thing of you Western people. I don't know but I should like to be one of the "sons" too, awhile, if I could only learn how.

SWARMING BOXES OR "BUSHES."

I have seen a great deal in GLEANINGS about swarming-boxes, and various other devices for catching swarms of bees; but I like my own the best, which is made of small hemlocks, from six to ten feet long, trimmed nearly to the top, with several old mullein-tops fixed in the top so as to look like a swarm of bees a little way off. When they come out I keep watch and see where they are going to cluster, and hold my bush right there, and they will alight on it nine times out of ten; then I carry them where I want them. **E. B. SMITH.**

New Milford, Susq. Co., Pa., Jan. 1, 1883.

BURYING BEES.

On page 41, Jan. GLEANINGS, William C. Holmes inquires about rats and mice getting into hives buried in the ground without bottom-boards. Poison them with a piece of meat, or a pan of meal with a spoonful of arsenic mixed. I bury part of our bees; have had splendid luck; never lost any. Two that were queenless went into hives that touched their own. I was taught a little different mode of burying bees than I have seen in GLEANINGS. On a dry side hill we dig a trench 3½ feet wide. Upper end is nearly 3 feet deep; a ridge-pole the whole length, resting on stakes. We set two rows the entire length, as close in the rows as we can get them. Use pieces of boards, or pieces of wood, from ridge-pole to bank; hay or straw enough to keep the dirt from falling through; then six inches to one foot of earth is plenty. We leave them until warm weather, shovel off the dirt, and then set them out as fast as we can. It would not do to try to set them on summer stands, but set them here and there. After they are done flying, set them where we wish them to remain. That is my mode. They always find the right hive, or come out even. I leave them in the pit, or clamp, sitting on the bottom-board of their hives; two auger-holes in front end of hive; very little opening on top. **Fred Timmerman, 75.**

Fayette, Fayette Co., Ia., Jan. 10, 1883.

I presume, friend T., you object to putting each hive at once into its permanent place only because of the time it takes. If they can be handled so quietly that none are determined to fly out, I think I should prefer to have every one in place as fast as set out. I don't like hives sitting around "promiscuous like."

BEES IN SOUTH CAROLINA.

As I see so little in GLEANINGS about bees or honey in South Carolina, I thought perhaps a few lines from one who has had a few years' experience in modern bee culture in this State might be of interest to your readers. The first thing is, the bees of this part of the State, with few exceptions, are kept in box hives. It was just fun to see the looks of astonishment and wonder on the faces of the old "box-hive" men when I first placed your one-pound sections on the market. Well, I was not surprised at their looks, for they were nice enough to make an old veteran wonder; that is, a veteran in the bee business. A great many were surprised to know that each hive contained a queen. They knew there was a "king bee," but few had ever heard of a queen.

I have seen the opinions of many in your invaluable journal, on the color of Italians. Let me say, right here, that, for honey-gatherers, I will hold up my hand every time for the dark ones, although I invariably raise other than light ones for the market.

My apiary of Italians is situated about two miles from the basin of the Wateree River, which is about four miles wide on this side, and grown up in a dense swamp. This supplies our bees with honey of the choicest kind during the months of April and May, and in great abundance. We do not plant any thing for the bees as yet, not having advanced that far. Some years they get considerable honey from cotton, which is grown extensively here. Our main honey-crop is gathered before the middle of June, after which, until the cotton blossoms, our bees are idle. I wonder if any of your readers ever saw a swarm of bright yellow Italians in the air, just about sunrise. I don't think there is any sight about bees more beautiful. The scarlet rays of the just risen sun shining on the yellow bodies of the little chaps gives them the appearance of so many golden beads sailing about in mid air.

CARING FOR QUEENS PURCHASED IN SPRING.

There is one thing I wish you would do; that is, direct your A B C class how to manage early queens when they first take them from the mails, as sometimes they get them a little chilled in April or May from the South, and, without giving them even a warming, ship them right back to the more genial clime of the sunny South. **W. J. Ellison.**

Stateburg, Sumter Co., S. C., Dec. 22, 1882.

Your concluding remark is a good one, friend E. We know by our own experience that new hands at the business do sometimes call a queen dead, when received in the spring months, when she is really only dormant, and stiffened by the cold. Holding them in the hand, and breathing on them, will often bring them to life; but we have had cages of bees that had to be kept in a warm room 8 or 10 hours before they revived; but they seemed all right after the awakening. Never decide a queen to be dead, until you have given them a chance to revive, as I have stated. As soon as able to move, a little warm honey on the tongue of the queen will often give her strength to get up and make her toilet.

WIDE FRAMES OF SECTIONS; HOW TO GET THE FIRST ONE OUT OF THE HIVE.

I have just read your reply to C. W. Young, page 40, Jan. GLEANINGS, to his question how to get wide frames and sections out of the hives. Let me give you my method. My supers are 16⅛ wide, inside measure, but I put in only 7 wide frames filled with sections, and either a frame 1¼ inches wide filled with fdn., or one filled with comb. I usually put the frame of fdn. or comb in the center of the frames in the super, and, being narrower than the frame containing sections, it does not touch them on either side, and can easily be removed at any time, and the frames of sections taken out without trouble. As often as the narrow frame is filled with honey I extract it and put it back again. If a frame filled or partly filled with honey is used it will generally set the bees at work in the sections at once, if they are in proper condition.

BIG REPORTS IN THE JOURNALS.

Now a few words about some of the big reports that we occasionally read in the bee papers. What puzzles me is the fact that the largest reports are usually made by those that are just beginning, and have the least experience in the business. A tenfold increase of bees, and 100 lbs. of surplus honey per swarm, spring count, is something that has never been reported by such specialists as Doolittle, Heddon, Given, Dadant, and others of their experience. I sometimes think that those making such large reports must have a very favorable location, or else they have got a strain of bees unknown to other bee-keepers, or else they are — well, no; I won't say romancing, when they make their big reports, but they are at least very fortunate. A bee-keeper living near me reported in GLEANINGS a few years ago, 115 lbs. of surplus comb honey per swarm; but to my personal knowledge, half of the amount reported was not taken from the best hive. I have had 12 years' experience in the business, but I don't know half as much about it as I did (or thought I did) 11 years ago. I have had over 100 swarms some of the time, and the longer I keep them the more I find I have to learn. **O. E. Cooley.**

Ridgeway, Ia., Jan. 11, 1883.

The plan you give, friend C., is the old one of getting out the first frame of sections. As given in GLEANINGS some time ago, we set this single comb into the center, and put three wide frames each side of it. Of course, they were arranged so the separators were facing this central comb, which might have a little brood in it, to induce the bees to go to work at once in the sections. After it was used extensively, it was found the bees would fill the comb so often that we got a great deal of extracted honey, while we might have had comb honey. It was also inconvenient to wedge up the wide frames with their sections, and we can not well get real nice straight honey, unless the sections are wedged up so as to keep the separators straight, and not leave interstices for the bees to fill with propolis. — The fact you mention, in regard to large reports from new hands, was commented on at the Kalamazoo convention. Two reasons may be assigned for it. One is, that our old bee-men have without doubt overstocked most of their localities for average seasons. Another is, that the fresh enthusiasm of an A B C scholar is often worth more than the ripe experience of one who knows how, but don't do it, always. The new hands work with a will, and leave nothing undone: old hands often get lazy or indifferent. The reports through GLEANINGS, month by month, bring this point out in a most wonderful manner. Aside from this it is likely that an untruthful man might turn his attention to bees. If he is untruthful in other things he would most likely be in his reports. The best way to cure him is to give him to understand that untruth, like murder, will out, and to go right to him and tell him of it. Of course, *very great care* should be used in doing this, that we do not wrong an innocent party. Very few of the reports we have given have ever been questioned, and by far the greater part of them are corroborated by the neighbors, for most bee-men are such a genial, neighborly sort of people, that they call in their neighbors to see what wonders they are doing.

PARALLEL BAR TO SAW-TABLE.

I have just been reading your directions for fitting up a buzz-saw, in the Dec. No., and can agree with them fully; but there is one thing you omit, in telling how to place the parallel bar on the saw-table. To have this bar so it will at all times be perfectly parallel with the saw (and this is very important to do good work) at whatever distance from it, it is absolutely necessary to have the bars of iron on which it swings, *exactly* of the same length, measured from the holes in the ends of the bars where they are screwed or bolted to the wooden bar, or gauge, and the table. To adjust it properly, place the gauge-bar exactly parallel with the saw, and then extend the iron bars at exactly a right angle with the gauge-bar, when they are screwed or bolted to the table. This may seem like a small matter to write you about; but a lack of this knowledge once caused me considerable bother and perplexity, and then I had to go back to the blacksmith shop and get another pair of irons made. Before I took Mr. Greeley's famous advice and "went west," I had a shop with steam power, and quite a lot of wood-working machinery, and hence feel a good deal better posted in that branch than I do in any thing pertaining to bees.
E. HUNT, 25.

Sheridan, Montcalm Co., Mich., Jan., 1883.

You are right, friend H. I have had exactly the trouble you mention. These irons, when bored, should be screwed together, and then they are exactly right. Furthermore, the holes in them should be at least ¼ inch, and they should turn on pivots of tempered steel, so as to avoid any shake or spring. Boards sometimes have a fashion of crowding, and running on the saw, and we want this bar to hold them right to the mark.

HONEY FROM ASPARAGUS.

Is asparagus a honey-producing plant? I have a small patch in my garden, which, after having been cut as long as wanted in spring, is allowed to run up and blossom and go to seed. It remains in blossom a long time, and I notice that, while in bloom, great numbers of bees are very busy upon it from early dawn until dark. I am satisfied that they gather quite an amount of pollen from it; but what amount, and what quality of honey, as yet I am unable to determine. The flowers are very numerous, small, and of a rather peculiar shape, having an almost bell-shaped, six-partite perianth upon an articulated stalk; six stamens, one style, with three recurved stigmas. Who has had experience enough to tell us more about it? Bees certainly work upon it very diligently; and if it should be positively ascertained that it produces an abundance of honey of good quality, it would be a profitable crop for bee-keepers to cultivate, from the fact that it is a vegetable that sells well in market, at remunerative prices, in the early spring months, while enough might be left to run up and blossom for the bees to work upon. It would come in bloom, too, when other honey-producing plants are gone.
H. V. N. DIMMICK.

Hubbardsville, N. Y., Jan. 22, 1883.

I, too, have seen bees at work on asparagus, but our patch was so limited I could not well ascertain how valuable it might be. Will those who live where it is raised largely, tell us more about it?

THAT STATISTICAL-TABLE MATTER. HAVE YOU ATTENDED TO IT?

I wish you would give a *strong urge* in Feb. number about sending in reports (editorially.) A steady stream has been coming for 2 or 3 weeks, and it looks like a good success; but some, perhaps, may think the omission of one report makes little difference, or that they have sent their report to conventions. Now, if you lay yourself out on it you can, I think, get each reader of GLEANINGS to report. Mercury 31° below zero yesterday; 29 to-day.

Marengo, Ill., Jan. 22, 1883. **C. C. MILLER.**

You hear it, friends! Now please go, this minute, and give friend Miller that report on a postal. If we don't give the world some statement of what we are doing, how will they know it isn't all glucose, and that we are a class of frauds banded together, just to impose on honest, hard-working people? Don't make good resolutions, but just act. If you get the postal, and put it down right now, it will be done with. If you can't write it, tell it to some of the children. On page 26 of January No., friend Miller has told you just what form to put it in, and there are only six items. Please, now, don't drop it, but do it this minute, and then you will have a clear conscience for the rest of the day.

ARTIFICIAL SHADE; SUNFLOWERS.

In the spring, in my hot-bed I plant sunflower seeds. When up about 8 or 10 inches high, I transplant around my hives, leaving a passage behind to work the hives. This succeeds well. The flowers are grown up when the hot weather sets in, and makes a splendid shade, and it screens the operator when working with the combs. Sunflowers furnish pollen and honey; bees worked hard on them all the time they were in bloom, and when ripe they furnished a lot of feed for my fancy chickens, so they are very profitable.
WM. HARTRY.

Brussels, Ont., Can., Dec. 18, 1882.

HOW TWO QUEENS FOOLED ME; THOSE AWFUL HYBRIDS ONCE MORE.

The most of my queens last summer were three years old; and during the swarming season the most of them were superseded, and a good many hybrids were raised in place. During the honey harvest I had no time to raise queens to replace them, but let them go thus till I had more time. When extracting I would put the empty combs of one hive in place of full ones taken out of another, as other people do, I suppose, and by this means I got hybrids mixed through all my pure colonies, for the queens, for want of room below, would lay eggs up stairs in the empty combs before the bees could get them full of honey. I had three colonies that I will call A, B, and C, that I thought I would breed from, because their bees were a little finer marked than the others. After the harvest I went to raising queens, to Italianize up again; but a good part of my young queens would still be hybrids. So I kept raising and introducing till October, and I then had 6 or 7 hybrids still. Then I took the queen out of colony A, and thought I would raise a fine lot of cells, and close out for the season. Some days after, I looked to see how many queen-cells were started, but found none, but plenty of eggs. So I found another queen in there doing duty that had probably been raised from that hybrid brood put in. I now began to scratch my head, and could begin to see why so many of my queens proved to be hybrids. I then went to hive B, opened it and examined it closely, found they had raised a "new" queen, and the hybrid bees hatching out by the thousand. This opened my eyes fully. I am almost ashamed to tell this, but it is really a fact. Now, I have always thought that I was more particular and more guarded than a great many men lest I might commit mistakes; yet in this instance I have been completely fooled by two queens. S. C. Fox.

Maysfield, Milam Co., Tex., Jan. 9, 1883.

Friend F., your mishap may not be altogether "fooling," after all. Several facts recently given seem to indicate that brood taken from one hive and put into another will often result in an extra queen, and, of course, from the brood put in. Had you put *pure* brood into a *hybrid* hive, you would have had it the other way. Do you see?

ABSCONDING SWARMS; HOW FRIEND SHEPARD STOPS THEM.

I see so much said in GLEANINGS, and especially in the JUVENILE, of late, about bees "running away," "going to the woods," etc., I thought I would give your readers my plan for stopping all these runaways. I will just say, I have tested this plan for over ten years in an apiary of from 80 to 150 colonies, and have not in that time lost a swarm, though many have tried hard to go. My plan is this: After hiving a swarm (my bees never try to go off till they alight), if they start to come out again, when a few, about a quart, perhaps, have left the hive, I stop it up, keeping the rest of the swarm for about a minute; then I open it, letting out about a quart more. This confuses those that are out, as there are not enough to go to the woods, and they soon begin to come back to the hive they came from. As soon as I see this I open the hive; then there is a rushing-out and going-in for a few minutes, when they all go into the hive again. If they try it again, I serve them in the same way, when they soon give it up and go to work. I have had them try to go as many as four times, but I always conquer them. Now, how many of your young bee-keepers will try this plan and save their bees? N. N. SHEPARD.

Cochranton, Pa., Jan. 22, 1883.

While it seems quite likely that some such disturbance would upset their plans for decamping, it seems to me it will be quite a difficult matter to be on hand at just the minute they may start, as they come often at any time of day, almost, and without note or warning. We are, however, much obliged to friend S. for the idea, as it will enable us to know how to act when we *are* on hand.

SUBSTITUTE FOR ENAMELED CLOTH.

Several years ago a bee-keeper in Los Angeles Co., whose name I have forgotten, showed me a kind of cloth which he used on his hives. It was some thin, white cotton cloth which had been dipped in a mixture of melted beeswax, lard (or tallow, I forget which), and other ingredients, which he did not know, having obtained the cloth from somebody else. The cloth was cut from a whole bolt into a long strip, the right width for the hives, and was then passed under a roller down into the hot mixture, so that the cloth was thoroughly impregnated with it. After cooling off it was wound upon a round stick, which kept it smooth, and from which pieces could be cut, when desired. The cloths on the hives were all lying smooth and even, not a hole in any of them, and no wax or propolis attached to the under side. The frames came up even with the top of the hive. He would take hold of one corner of a cloth, and peel it back to look at the bees; and when replaced, the cloth lay as smooth and even before. They stuck fast just enough to prevent the wind from blowing them off, if the cover was off. Now, here you have something to experiment on, and perhaps you can, with these incomplete directions, hit on something that will be better than enameled or any other kind of cloth.

ANOTHER WAY OF BINDING PERIODICALS.

The way I have been doing it is this: Lay all the numbers of a volume in their order on the edge of a table, with their backs to you. Make the backs all come even and straight with each other. Then clamp them together with a carpenter's hand-screw (two might be better). Now with a long awl pierce them one inch from the upper end and lower edge, and ¼ inch from the back. Again pierce them one inch inside the other holes. Then with a long slim darning-needle bring a double linen thread twice through each pair of holes; draw the thread tight, and tie it securely. This will hold them well, although it may not be as good as T. J. Cook's plan, but easier done.

SMOKE FOR RELIEVING PAIN.

The smoke of burning brown sugar is such an old, well-known remedy, that I wonder you should disbelieve its effect. I also often smoke my hands with the bee-smoker when bees are "bad," although never using any thing now.

WM. MUTH-RASMUSSEN.

Independence, Inyo Co., Cal., Jan. 14, 1883.

FROM 5 TO 51 IN 2 YEARS, AND 1400 LBS. OF HONEY.

I began the season of 1881 with 5 colonies of blacks, and increased to 23. The spring of 1882 found me with 18 colonies, after losses by queenlessness and robbing were over. From these we have taken about 1400 lbs. of extracted honey, and increased to

51, nuclei and all. We fed 150 lbs. of sugar for winter stores. With the exception of this and a few pounds of basswood, their winter stores are almost entirely goldenrod honey.

HYBRIDS, AGAIN.

The colony that gave the largest yield was hybrid, an Italian mated with a black drone. They were far gentler than any of my pure Italians.

EDGAR HUSBAND.

Cairngorm, Ont., Can., Dec. 28, 1882.

My report for 1882 is as follows: Thirteen colonies, spring count, 5 of which were transferred from log and box hives; amount of honey, 812 lbs., of which one-third was comb honey; 62½ lbs. per colony, and increased to 30, or 131%.

WINTERING QUEENLESS COLONIES.

From one swarm I sold the queen the 6th of Aug., and inserted a cell about to hatch, which they tore down; then I gave them eggs from a tested Italian queen. They raised a queen, and she was lost; so the last of September, when I prepared for winter, they were without any young bees or brood to commence winter with. What would you have done with the swarm, under these circumstances? I brimstoned them. Which degree of murder was it, —first, second, or third?

CANDYING OF HONEY.

We have tried to have our honey candy, and have sometimes failed, although it was set in a cool room in open jars, with the temperature hardly ever above freezing (it was very nice white-clover and goldenrod honey, thoroughly ripened). Last winter I mixed a little water with it, and then it partially candied; but this year it has candied perfectly.

GIVING UNSEALED BROOD TO A NEW SWARM.

You say, "Give the new swarm a card of unsealed brood." I have done so, and find that the brood must be put in the hive before the swarm is, or they will be very apt to swarm out and leave the brood. Every one I gave a card to swarmed out soon after they were hived. When a swarm is hived they should be left as quiet as possible, with plenty of air, or they will be roasted out; and be sure to have the frame in place, or they may build their comb in bad shape.

A SMART QUEEN.

A hive swarmed, having a virgin queen; and wishing to return the swarm, and knowing they had another cell about to hatch, I took out the card containing the cell, and stood it against a tree, three feet or more from the hive. In a few minutes, and before the swarm was all clustered, we saw a queen on the edge of the hive next the card. We then looked at the cell, and found the cell empty, as she had flown back. I think she flew, as the ground was grassy, and would have taken a longer time to have crawled. We had a queen hatch on the fourteenth day, and I don't want any more, as the bees then began to tear down the cells. I think I should prefer the Holy-Lands to raise queen-cells.

D. M. TORREY.

Shiocton, Outagamie Co., Wis., Jan. 15, 1883.

I think it was murder in a very bad degree, certainly, friend T. If there were plenty of bees, they would have wintered all right, and you could certainly have given them some sort of a queen.—I am glad to know that you have demonstrated that thin honey will, at least sometimes, candy sooner than thick; but I wouldn't like to have it said I was in the habit of putting water in my honey, even if it did make it candy.—It may be that it makes a difference whether the bees be given to the comb, or the comb of larvæ be given to the bees; but I should be inclined to think your experiment was accidental, until the matter is verified by further experiments.—The young queen may have flown from the comb, as you suggest; but as second swarms often have several young queens, I should not be surprised if one had escaped your notice.

CALIFORNIA HONEY ON THE RISE.

As we buy quite a little honey of friend Wilkin, we wrote him a short time ago to know what he could let us have some more for. The following is his reply:—

It is almost impossible to get any such honey in California now. I sent 30,000 lbs. to Liverpool in September, and have received an order for about 70,000 lbs. more; but as the quality is not what I like, I shall furnish only a small portion of that amount. I send you a sample of what I have on hand; and if it suits you I will deliver it to you at Medina at 12½ cents, in lots of six cases or more. R. WILKIN.

San Buenaventura, Cal., Dec. 26, 1882.

The above looks a little more like making it a paying business than it did a few years ago. I presume our Pacific friends are now only waiting for another flood of honey, such as they used to have a few years ago.

FROM 29 TO 90, AND 4000 LBS. OF HONEY.

Last spring was very poor for bees; so Edmund Pickup fed about 50c worth per hive in bee candy, sugar, and honey. In the fall he got a little over 4000 lbs. of comb honey; an average of 138 lbs., spring count, and increased from 29 colonies to 90, besides six swarms otherwise used, and eight got away. More than one-half were black bees. The best colony in spring produced 236¾ lbs., and three swarms; the best old stand, 99¼ lbs., besides one swarm. From the best new swarm, 122¾ lbs.; from the best 2d swarm, 68 lbs.; from the best third swarm, 27 lbs.,; the best 4th swarm, 29½ lbs. Honey at 15c per lb., and new colonies at five dollars each give a net compensation of $30.50 per hive in spring. John, brother of Edmund, has an interest in the bees; so the Pickup brothers show great skill and industry in raising them. Yesterday Edmund gave to the Limerick church 666⅔ lbs. of honey — one hundred dollars' worth — for an endowment fund. This is a praiseworthy act of Mr. Pickup, and will live after him. Besides the above, we understand he has given 34 lbs. to preacher's salary, and 100 lbs. for church repairs. RUTH.

Friend Pickup, of Limerick, Ill., tells us the above was written by the minister's wife, for the county paper.

LARGE STORIES.

Do you not think some of those bee-keepers out your way tell some pretty big stories sometimes? I believe if there is so much honey out there it will be coming down here in a flood some time. What do you think? Some say they can dip it up with a teaspoon; some say they get all covered with honey from wheat-stubble, so they can't hardly work. It is too bad, but I can't help it. I guess they will get through. Don't you think so? I did very well this year with my bees. I had six swarms last spring. I now have 13, nice and strong; one swarm of hybrids, very ugly. FRANCIS C. SMITH.

Kilmanagh, Huron Co., Mich., Dec. 22, 1882.

Why, friend S., I have no reason to think any of the reports sent in are untruthful. In the first place, they do not come from any one locality, but are, as you see, scattered far and wide. And again, if you observe, the letters read as if they came from good, candid, hard-working men, who would have no object in making exaggerations. I agree with you, that it is indeed wonderful; but when it comes from "the mouths of many witnesses," it would not only be unreasonable, but unkind and unchristian like, to disbelieve it. You are a Christian, aren't you, friend S.?

A REMARKABLE YIELD OF HONEY; FROM 47 TO 64, AND 247 LBS. OF HONEY TO THE HIVE, ON AN AVERAGE.

Mr. James H. Cox, of Hudson, Ill., informs me that he started last spring with 47 hives of bees, and increased to 64 in the fall; but he sold several colonies during the summer. He took during the season something over 11,000 lbs., of which 4000 lbs. was comb honey. I do not remember the exact number of pounds, but the average on the 47 hives was about 247 pounds.

A TROUBLE WITH TWO-STORY HIVES.

I have had some inconvenience with these hives. It frequently happens, that at the end of the honey season the upper story will be full while the lower story will be nearly or altogether empty. Is there any way to prevent this, except by changing the combs? I can readily see that the Simplicity hives would be quite handy in such cases, as it would not be difficult to exchange stories.

Decatur, Ill., Jan. 19, 1883. E. A. GASTMAN.

Particular stocks seem to have a fashion of always going to the top with their honey. This is oftenest the case with hybrids or black bees, I believe, Italians having a fashion of keeping their stores down, and refusing to go up into another story, if they can avoid it. Where one has all the boxes above, and wants to get comb honey, the trait may be a valuable one; but in that case they must be carefully looked to and fed up for winter, if they require it. Setting the combs and brood below is perhaps the readiest remedy, friend G.

FROM 15 TO 36, AND 1462 LBS. OF COMB HONEY.

As every one else is sending in reports, I guess I must send in mine too. I started, last spring, with 14 hives; bought one of you, making 15. Increased to 36. Only one, that I know of, left for parts unknown last summer; and last fall, while putting them into winter quarters, I came across one hive with 15 or 20 bees in, but full of honey. I sold 1462 lbs. of honey; got 20 cts. for the most of it; amounted to $286.69. I have between 300 and 400 lbs. to sell yet. I laid aside 100 lbs. for my own use; have about 80 frames of nice honey that I took out to put the cushions in. J. A. KENNEDY,

Per Louisa.

That is doing pretty well for a man 74 years old, is it not? I help father with his bees. I can hold the smoker, you know, if nothing else. L. K.

Farmingdale, Ill., Jan. 20, 1883.

Whew! that last remark savors a little of JUVENILE GLEANINGS. I shall have to confess, Louisa, that I was wondering, as I read, how a man 74 years old could write so nicely. It seems, then, that you not only hold the smoker, but you write letters, and save your poor old father's eyes, and make Uncle Amos glad, to see you have done it so nicely, as well as so kindly. Well, well, perhaps the time may come when we shan't know young GLEANINGS from old GLEANINGS. Who knows? Oh, yes! Who can explain that hive full of honey, with only 14 or 15 bees in it? Let the children tell how it came about.

HALF-POUND SECTIONS; A FAVORABLE REPORT.

Can you arrange your machine to make the ½-lb. section, size about 3x3½x2? We have been using ½-lb. sections to a limited extent since 1878, and find them very profitable, if put on the hives properly, and the right care taken of them after they are put on. We will say further, that we have used them of all sizes, and with and without separators, and think that we have about the right size, and that we *can not* use them without separators.

Peoria, N. Y., Dec. 28, '82. J. C. NEWMAN & SON.

Inasmuch as the above is the first favorable report of these from one who has used them, we are very glad to get it. We have now our machinery arranged for making sections as small as the above, and are only waiting to have it decided what dimensions are to be called for most, before we keep them in stock and fix a price on them.

NICKEL INSTEAD OF ZINC.

I see on p. 626, GLEANINGS for Dec., an article on galvanized honey-gates. Allow me to suggest nickel-plating them.

KEEPING BEES INDOORS.

I am trying an experiment which may be of interest to bee-keepers. It is, keeping bees in the house in winter. A neighbor, an old-fashioned bee-keeper, was going to take up some bees, so I told him I would take up the honey for the bees; he was greatly astonished to think that the bees were worth any thing, but said I was welcome to them. So on Thanksgiving day I took them and brought them home. I had very unwisely sold all my surplus honey, so had nothing on which to feed them. I knew they would have to have some liquid in order to take up any candy, and I had no convenient way to give them any, so was at a loss to know what to do. At last it popped into my head to try keeping them in the house. As they cost me nothing, I knew that I should lose but little if I lost them. I made a cage the same size as a Simplicity hive, and covered it with wire cloth. I put a Simplicity feeder inside, and then put my hive on to the cage. I have fed them thus far about 5 lbs. of syrup. I find the best proportion for syrup to be 1 lb. of sugar and 1 lb. of water. At this date they have drawn out a large piece of fdn., and built some new comb on their own hook, in two empty frames; they have filled most of it with syrup, and capped part of it over. I am now trying to get them to raise brood.

A. C. MILLER.

Barrington, Bristol Co., R. I., Dec. 30, 1882.

I think nickel plate would do nicely, friend M., but you know that would be a little bordering on the aristocratic, which would not matter so very much, if it were not for the expense.—I am always interested in experiments in regard to keeping bees indoors, because it seems, from the success that has been many times made with single colonies, that there certainly is something here we are not yet familiar with; and when we can once manage to build any colony up in midwinter, our wintering troubles are surely over.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

I HAVE the worst luck, and the most of it, of anybody. I began last spring with one mothy stand of bees; they swarmed three times — one good, one fair, one small. The first did well; the next made enough to live on till winter; but when the moth was about to get the best of them I put them with my last swarm. The old stand which I transferred in November, died with plenty of honey. I don't think they had any queen, for I never saw as many drones in my life in one stand at one time. I am satisfied I killed half a gallon of them when I transferred them; that was after they had done swarming. Now to-day, the one that I doubled is dead too. They had plenty of honey, all sealed at that; also pollen. It was not honey-dew honey, for they had not eaten any of it. It was sugar syrup that they had lived on all fall. I have read your A B C, but can't find any thing to correspond with my case. Now, what is the matter with them? If you know, will you answer through GLEANINGS? But, don't put me in Blasted Hopes yet.

HONEY-DEW.

How many bugs do you suppose it would take to make a gallon of honey? The woods were one shining sheet for a month or more with it. It seems impossible that aphides could produce such quantities of honey. JAMES T. SWAN.

Smithville, Clay Co., Mo., Jan. 18, 1883.

Well, really, Friend S., I don't know where else to put you, after you say you have had the worst luck, and the most of it, of anybody. If, with the A B C before you, you have let those bees go on raising drones until you killed half a gallon at one time, it seems to me there hasn't been any bad luck about it at all, if you will excuse me. Why did you not look into the hive, and see if they had a queen, instead of letting things run on in that way? Had you not spoken of transferring we might think you had them in a box hive; but why one should let things go on thus, when their bees were transferred, is more than I can imagine. If the woods were shining with honey-dew, I am inclined to think this may have had something to do with the other one dying; but it wasn't the honey-dew that caused them to rear drones by the gallon, sure. The matter was, friend S., that you didn't look to your bees enough to know whether they had queens, or were rearing useless drones. All the books and all the bees wouldn't help one who neglects so simple a matter as this. Can't we look for you next in Reports Encouraging, friend S.? If your one hive swarmed three times, your locality is certainly not a bad one.

Notes and Queries.

BEE-STINGS FOR NEURALGIA.

I AM, and have been, a great sufferer from neuralgia, and it is with much effort that I have written. I am a firm believer in the efficacy of bee-stings to remove this disease, and I long for the time to come when I can again live and work among the bees. MARY SMITH.

Plattsburgh, N. Y., Dec. 28, 1882.

Bees are all O. K.; am using Quinby hive; commenced with 2 colonies in the spring of 1882, and increased to 9. W. E. POTTS.

Edna, Kans., Jan. 17, 1883.

FROM 9 TO 19, AND 700 LBS. OF HONEY.

Spring count, 9; increased to 19; 700 lbs. of honey; bees nicely prepared for winter, in chaff hives. D. J. SPENCER.

Vernon, Trumbull Co., O., Dec. 23, 1882.

FIFTEEN FROM ONE; WHAT DO YOU SAY TO THAT, FRIENDS?

I have got the biggest increase of bees from one swarm in the State—15 swarms from a May swarm, 1882. BENJAMIN MORRIS.

Spencer, Ind., Jan. 15, 1883.

[Tell us more about it, friend Morris.]

FROM 12 TO 31, AND 1200 LBS. OF HONEY.

I had 12 swarms of bees in the spring of 1882, from which I got 900 lbs. of section honey, and 312 lbs. extracted, and 19 surplus swarms, which made 31 swarms to commence the winter with, all in good shape. How is that for 12 swarms?

Jefferson, O., Jan. 22, 1883. J. E. RUGGLES.

THE FIRST HONEY REPORT FOR 1883.

There is not much honey coming in at present, but any quantity of pollen, and I am raising queens from the dollar queens received from you last summer, I followed friend Cook's plan. From one swarm I have drones, and from two others I have 26 queens, cells capped. G. DELONO.

Key West, Fla., Jan. 11, 1883.

FLORIDA; NEW HONEY.

I left my home in Ohio the 27th of last November; have had some quite cool weather for Florida this winter. Thermometer in the shade to-day, 79°. Bees are flying almost every day, carrying in pollen and some honey. It would be quite a good place here for bees, but not as good as on the coast, for there are no mangroves here. C. F. HOPKINS.

Orange City, Fla., Jan. 17, 1883.

STANDING L. FRAMES ON END FOR WINTER.

I guess the 8x17 Langstroth hive is not just right to winter bees in. Those L. hives that came through all right, the owner had stood up on the nose, or front, raising the rear of hive about 45 degrees, packing the outside with straw, showing, to my mind, that the 8x17 frame is not right for this part of the country. J. W. TAFFT.

Buffalo, N. Y., Jan. 20, 1883.

[The above came to hand after our article on p. 79. While it shows that this man wintered his, and others around him did not, it does not necessarily follow that it was because the hives were stood on their "noses," as our friend quaintly expresses it.]

I commenced with one swarm last spring. I have three now, and I got 300 lbs. of honey.

ALBERT UNSWORTH.

Sandusky, Sanilac Co., Mich., Jan. 5, 1883.

My bees did well last summer. I had 39 in spring, and 64 now. I got a little over 6000 lbs. of extracted honey. I have 40 in chaff hives, and 26 in bee-house.

Cedarburg, Wis., Jan. 9, 1883. F. BEHRENS.

I started last spring with 18 swarms of bees; increased to 52, and have taken out during the summer 1100 lbs. of section honey, mostly all white clover.

H. K. WOOD.

Rives Junction, Mich., Jan. 15, 1883.

I have horsemint growing all over my place; it makes lots of honey, but it's strong. In the woods we have hawthorn, elm, osage orange, and pepperwood; honey from the last named is too hot to eat.

M. A. LUCKEY.

Ladonia, Fannin Co., Tex., Jan. 4, 1883.

Started in the spring with 11 — three poor and eight strong colonies. I increased to 31, and gave me nearly 400 lbs. of surplus. In the fall I sold 3, and 27 I have packed with chaff on their summer stands; 4 common and 23 extra good ones.

Manchester, Pa., Dec. 27, 1882. ALBERT HAKE.

I had 17 swarms of bees in the spring; have now thirty, with 2100 lbs. of surplus honey, and enough in hives for winter, and 20 lbs. of beeswax. I sell extracted honey at 12½ cts. per lb.; comb in section boxes, 15 cts. I think I shall have it all sold in time for next year's crop, and not go outside of Iowa Co.

Ladora, Ia., Dec. 12, 1882. J. N. SHEDENHELM.

I have realized $104.50 from bees, honey, and queens, and have 22 stands, all in good shape. All the labor with them did not exceed ten days. How will that do? W. H. FERGUSON.

Bloomdale, Ohio, Dec. 26, 1882.

[Few things would do better, I should say, friend Ferguson.]

FLORIDA.

Here I am, away down in Florida, the land of flowers and perpetual summer, or nearly so. I am looking up the bee business here; but at this time the bees are not doing much. I left all my bees at the North, packed snugly in chaff, while I am wandering about Florida. I hear from home that the winter is a genuine old hard one so far. The climate here is very fine, and has been since I came here four weeks ago. FRANK MOSS.

De Land, Fla., Dec. 19, 1882.

HOPES NOT "BLASTED."

I lost all my bees two years ago this winter — between 60 and 70 swarms, but I didn't give up. I looked around and found others about the same as myself; couldn't buy any in the fall; went into the woods and found 3 swarms; got them home, fed them some, got them through the winter all right, and last summer I increased them to 19 swarms, and had all the honey we wanted, and sold about $20.00 worth. I have plenty for the bees.

Edgerton, Wis., Jan. 6, 1883. R. H. PHELPS.

TWO QUEENS IN A HIVE.

One of my hives had two queens for sixteen days. (I don't know how much longer they would have stayed together if I had not separated them.) They were mother and daughter; the mother is this year's queen, got of E. M. Hayhurst; she is good and prolific. I don't think she was being superseded; do you? JAS. J. CHURCH.

Waterford, Ont., Can., Dec. 21, 1882.

[Not necessarily; such cases are more common than most people are aware of.]

MAKING FDN. ETC.

The foundation-mill that I got of you last summer gives good satisfaction. Would you please tell me, in a few words, how to get the fdn. dry?

JACOB SILLS.

Cedarville, Stephenson Co., Ill., Dec. 15, 1882.

[If you use starch as a lubricator, friend S., your fdn. will be dry as it is made, or nearly so. As the rolls press the starch out of the way as the wax passes through, we cut it up and box it immediately, or put it into frames to use in the hives, as it is wanted.]

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

GLEANINGS has been rather flat for some time. Surely there is a large field open to you in the scientific part of bee culture. Would not your own experiments pay — e. g., the weighing of bees, their honey-carrying capacity; wax produced from pure sugar, both grape and cane, and a dozen other interesting matters? Your own apiary reports on wintering, etc., were very interesting, but you don't seem to have thought so, as these columns have nearly dwindled to nothing. Make thorough experiments on a large scale, such as those boys played at with their toy scales, and readers will be attracted to GLEANINGS. Wishing you success in all your enterprises, I remain,—

J. H. ELDRIDGE.

Earlham Rd., Norwich, Eng., Dec. 13, 1882.

Well, I declare, friend E., I have had many kind words for GLEANINGS, and our friends across the water have been usually most profuse in their words of encouragement; but I don't know that I ever before heard anybody call GLEANINGS "flat." It can't be you said it on purpose to hurt me, did you? I might feel a trifle hurt, were it not for the large favor with which our journal is now welcomed wherever the English language is spoken; and as it is, I will try to think it is always our best friends who tell us our faults, and so remember you as a little nearer than the majority of them. I know your point is a good one. I know how welcome are any items of my own practical experiments with bees, buckwheat, honey-plants, and the like; but with this whirlpool of business and letters to be read, I really don't know how I can do any better. May be when the college boys get home and take up some of this editorial work I shall do better. Meanwhile I thank you, and I will keep it in mind that one friend has thought GLEANINGS flat, and that I must studiously try to avoid "flatness." Wouldn't you, friend E.? I don't know now that this properly belongs in the Growlery; but I didn't find any thing any better, and the department ought to be kept up, you know.

Our Homes.

Though he slay me, yet will I trust in him.—JOB 13:15.

MY friends, I have a sad story to tell you to-day; and yet out of its very sadness I trust we may find a useful lesson. You have heard me speak of our Canadian boys, and have doubtless known that one of them has had charge of the apiary principally, for the past two years. He came here to learn bee culture, while his brother, older, remained to care for the bees at home in Canada. It is of this one that I would speak. Some of you may remember a bright, hopeful letter that he wrote in our Sept. No., 1881. If you have the number handy, it may be worth your while to turn to page 424. At the close of his letter we find these words:—

> Now, friend Root, I can hear you say," Very good, friend C.; but, go carefully; go slowly at first till you get experience." I promise you I will be careful, for I guess I know what care it has taken to put that little apiary in its present shape; yes, to build it up from nothing in six months; but to go slowly, never! I have a great many faithful advisers on this point, and I would say to all such who may read these lines, that, with all due respect for your good wishes and greater experience, "Please before you say further, come right here and step into my shoes." I have lived a quiet country life on my father's farm for twenty years; but that life is at an end now, and time is precious; time is money, education, influence, every thing, and time is short.

There is nothing especially peculiar in the above, and the feeling he expresses there might be shared by many a young man of twenty; but, as nearly as we can well decide now, it appears that that letter was written when he was on the eve of insanity. A few weeks later his brother became so alarmed at the strange tone of his letters, that he showed them to me, and finally, by my advice, he went back to Canada and brought the writer, A. E. Calvert, here. We thought if we could get him here among our boys and girls we might, with God's help, lift him out of the despondency into which he seemed settling. For a time we seemed to partly succeed, and he took hold of our work, and was apparently one of us; but toward spring he seemed to settle back, and finally wrote a letter to John, who brought it to me. The letter was one of the saddest accounts of struggles with despondency and despair that one could well imagine. I saw him alone with his brother, and had a long talk with him about it. He insisted that his mind was gone, and that it was too late for him to be helped. He thought if he had come among us sooner, perhaps he might have been helped out of his trouble; but he continually insisted that it was too late. He said in his letter that he thanked his shopmates for the courteous way in which they treated him, but that they did it only out of kindness and politeness, for it must be apparent to everybody, as well as himself, that he had not ordinary intelligence. I told him, it was only a monomania he had fallen into, and that his powers of mind were unimpaired, and no one thought of such a thing. I plead and argued the matter with him, and took him by his great broad shoulders and told him he had strength of mind, and body too, to do a world of good in encouraging and cheering others, instead of settling down to brood over imaginary evils. I scolded him for giving way to temptation, and, with his consent, burned the letter and got a partial promise from him that he would not yield again to temptation, so far as to write any more in that strain; and before I left him he knelt in prayer and asked God to help him to overcome the temptation to yield to these evil thoughts, and to deliver him from the dark cloud that threatened to envelop his whole life, and to give him faith to say, "Thy will, not mine, be done." From that night on he seemed to begin to rise up; but as a further precaution I asked him to come up into my room every Wednesday evening, and tell me of his temptations, and we would, with God's help, surely bring him out all right. These meetings were kept up for many weeks, or until I felt he was in comparative safety. As I noticed still that he had a fashion of relapsing into a sort of gloom, or reading in a sort of mechanical way, hour after hour, John and I thought it would be well to give him some work to occupy his mind; and accordingly he was employed for several months in filling orders for goods that were to go by express. After the busy season was over he helped in building our new house; and toward fall I was rejoiced to know that both of the boys had decided to go back with Ernest to Oberlin to school. It seemed to me that Oberlin was the place of all places to get one to feel that life is worth living for, even for those in humble circumstances. He took hold of his studies well, learned easily, and made unusual progress; and when he came home at the holiday vacation I inwardly thanked God that Albert had been, so far as I could see, raised from the dreaded fate that seemed at one time to hang over him. Even though he seemed so safe, I determined to have, at the first opportunity, a good long talk with him in regard to his old malady, and find out whether he had been subject to his old despondent moods any more. I once went over to his room in the new house, for this express purpose; but as he was busy talking with others, I let it pass. No opportunity offered, and the day came for them to go back to college. For a trifling reason they neglected to take the morning train, and so the boys were sitting around through the day, not doing much of any thing. It was almost train time, and we were taking supper rather earlier in the lunch-room, that the boys might not be late for the train. Albert had been around within an hour, so we sat down without him. After we had partly finished our meal, I remarked,—

"Why, it seems strange that Albert should be away so long, when it is so near train time."

The others made some comment, and Jacob remarked that he saw him a little while before, going into the house apiary. John arose hastily and went out; but if I saw it, I thought nothing of it. In a few moments more I was startled and stunned by the sudden appearance of John's white face, which came before me as a dream. I presume it was the words that stunned me, for I could hardly tell whether I really heard them, or whether it was a freak of my imagination. The words were something like this:—

"O Mr. Root! Albert has shot himself, out in the house apiary."

As soon as he said it he was gone again. He spoke so low that few heard him; and as I passed through the hands in the packing-room, I almost envied their ignorance of the great sorrow that lay upon us. One of them was scolding pleasantly because so many kept leaving the west door open. Soon work was stopped, and sad groups were scattered through the apiary, and over the factory.

He had been well liked by the hands, for, indeed, it were a pretty hard matter to find any thing against him. Many had noticed his gloomy spells, but the greater part of them knew nothing of the insanity that hung over him, unless it was the near friends or his brothers. Now little incidents began to come up, related by one and another, and things about him we could not understand before, now began to be explained. Was he crazy? did he deliberate this act in his sane moments? we all began to inquire within ourselves, if not out loud.

When he commenced shipping goods last summer I required him to bring all to me, to inspect, before he did them up. Well, after he got used to the business he thought this unnecessary, and sometimes sent them off without my inspection. At one time the clerks began to complain that some one meddled with their goods, after they were inspected, ready to pack. I could hardly believe they were not mistaken, until some one told me he saw Albert take a smoker from another man's goods, and use it to fill an order of his own. I took him one side, and asked him about it. He neither acknowledged nor denied it. I became somewhat vexed with him, and talked pretty severely. This seemed to arouse him.

"Mr. Root, do you think I would do any thing dishonest?"

"Why, no, Albert; I can not well call it dishonesty, for there was no motive for it, or no selfish one; but will you please tell me why you did take a smoker out of that box?"

Now he spoke full and free. "Why, Mr. Root, I can not tell why I did it. If they saw me do it, I suppose I must have taken it; but I have no recollection of ever having done such a thing at all."

He promised to be careful in the future, and I let it pass; but now it looks plain that there were times when he did not know what he was doing. May it not have been at such a time when he did this awful deed, and that he was in no way responsible for it? No letter was left (for I had exacted from him a promise to write no more, for it seemed to me to hurt him to dwell on it and write letters), and it would seem that none but God, who reads the human heart, will ever know the secret of that hour.

I have told my sad story, friends, and I have told it as fairly as I know how; and the saddest part of it is, that it is true there is a phase of humanity, a disease, if you choose, that attacks men and hurries them on to deeds like these. I have studied insanity quite a little, both among friends whom I knew, and among the poor unfortunates whom I have met in our Sunday service at our county Infirmary. I confess that few things in life have had such a tendency to cast me down, and to almost tempt me to doubt God's kind loving care, as these cases of insanity and suicide. Sickness and death do not appall me, because the suffering one may hold on to God's great promises, and rest even amid the most excruciating pains, trustingly in his arms.

While enveloped in the sadness and gloom of this event, all at once the idea occurred to me, suppose Albert had died a natural death of sickness, or by accident. My heart almost bounded at the thought. Oh how gladly would we have seen him die thus, in preference to such a death! And yet, why? Proofs of his occasional insanity were many and satisfying; why, then, should we repine, and indulge in useless regrets that we did not do something more for him?

Again: The Bible says, "Come unto me, all ye that are weary and heavy laden." Does this apply only to sane people? Are the comforts and sustaining powers of religion for the diseased in body, and not for those diseased in mind? Our departed friend was a professor of religion; he prayed God to help him in his great trouble, as I have told you; and he rose up and spoke in our young people's prayer-meeting, only a little more than a week before his death. How can it be? and why did God, in his wise providence, allow such a thing to happen? or, why should such things as suicides be known in this world of ours?

I am pretty sure there are some among my readers who will feel like reproving me for having written the above—who will say that it is wrong and wicked to even question God's loving-kindness for a single moment. I agree with you it is wicked, and I soon knew it was wrong for me to let such thoughts force themselves upon my mind. I prayed for light, and I am glad to say that light did come. It came in the line of our opening text. Though he slay me, yet will I trust in him. Do you know who said that? As I thought of it, I began to see more clearly why the book that contains it was put in the Bible. It may be that it is only after having lived half a lifetime that we can feel the need of such a text, and thank God he put it there. Did it ever occur to you that the human mind is a wonderful piece of mechanism? The human will, too; who can understand or fathom it? The following may be helpful to somebody:

After the simple funeral services at the factory, John and his younger brother, Robert, took the body and went back to their northern home, while we took up the daily round of business once more. Some way I could not get to work as I usually do. Few things in life disturb me very much or very long while my trust is in God; but this event affected me differently from any other in all my experience. Every time I sat down to work, sooner or later the events of that day would come up and stand before me. When I ought to be reading your kind letters, my thoughts would be drawn away; and, before I knew it, would be going over the details again. He was last seen by Jacob, opening some of the bee-hives, apparently looking to see how the bees wintered. Another saw him open the door and go into the honey-house. Then I tried to follow his thoughts. I tried to pry into the secrets God had so effectually cut off from us by that great solid wall of death. Instinct tells us many things that we should not know otherwise; and now, what does instinct, if that be the word, tell us of death? My powers of thought are now well matured. If ever I shall be capable of giving a wise opinion, if that be the word, of life, and its termination, death, now is the time I should be able to do it. The subject began to have a wonderful fascination. I lay awake nights to look on and wonder at the new phenomenon that began presenting itself. You know how I am given to hobbies, and to following one subject intensely until every single fact and feature is scanned. In a week I began to suffer. I knew it, and yet it began to seem as if I couldn't get away from it. I knew, too, that it was taking me away from God; and old experiences of battling with temptation became painfully familiar. I prayed; but even the act of praying about the matter brought it freshly to mind, and harmed me. Was it possible that *I*, who had lifted others and exhorted them to be strong in the Lord, was going to be found a poor weak mortal whom Satan could get before, so that he could not even pray? Was there a possible chance that I should go crazy too? Indeed, I am not sure that any one is proof against some of the phases of insanity, if he will let his mind run and dwell constantly on one theme. I made up my mind that I could and would stop thinking of any thing that had the most remote bearing on the subject, and I did; and then I thanked God that he had implanted in my nature the power of fleeing from evil. A good lesson comes in here. It is almost folly for any one to pray to God for deliverance while he continues to dally with sin. God helps those who are trying to help themselves. Nay, more; he has no pleasure in a half-hearted service. There may be circumstances where no other way than prayer is left open to us; but he who prays should look to it well, that no faint trace anywhere lurks in the heart, of any thing like a disposition to look on the sin he has renounced; no wanting to so much as even turn the head to look back; but keep your eye on God, and your faith, "though he slay me, yet will I trust in him."

Another little incident: Last September, when the boys went off to school, to save railroad fares, and also to keep their trunks from being smashed, as Ernest expressed it, Jacob carried them all overland, with our faithful old Jack and the one-horse wagon. Off they started in high glee, followed by prayers and blessings. On that sad night, after busy hurryings to and fro, I happened to come from town rather late in the evening, and in doing so I passed a horse and wagon in the darkness. I turned and looked back. It was the self-same old wagon, and Ernest was driving. The wagon contained the corpse of his dead schoolmate and friend. It was the saddest event of his young life. While my mind was brooding over it in the days I have mentioned, I often thought of him, and wondered if he, so young, bore up under it better than I did, with my additional 22 years of age and experience. How short a time it seems since he was a toddling little chap with curly white hair! I remember that I wanted him to learn to walk, one day, but he didn't like to be hurried. He inherited from his mother some sturdy old English ways, and, unlike my enthusiastic Yankee way of wanting to hurry every thing along, he proposed to get a good ready, and plenty of strength, so that he might walk when the proper time came, and do it up right. Knowing him well, I employed a little strategy, to see if it was only because he lacked confidence, that he would not stand alone. I held a pictorial newspaper up before him, and got him to take it in his hands. When he was so absorbed in it that he forgot, I took my hands away from him, and left him standing alone, looking at the paper. I well remember how I laughed and shouted at the success of my experiment, and how he sat down when he looked around and saw I was not holding him. All along through these years we have been friends and companions, and it seemed on that sad night, as we talked the matter over, that he seemed more a friend, and nearer to me, than ever before. The drill of the college, and the companionship of good strong earnest men had been molding him to grapple with the stern, hard realities of life, and he seemed even in this matter to be steady and cool.

Well, in a few days a letter came. His experience had been almost exactly like mine. He had even given up one of his studies; and failing even then, he had gone to one of the strong old professors, and laid the case before him. He was told that, unless he took his mind right off from the matter, by force of will, it would not only be the ruin of his education, but the ruin of himself as well. He did it, and came out rejoicing, and praising God, as I had done. Am I wrong in thinking there is something in suicides, at least many of them, that can be guarded against by sheer force of will? Christians and humanitarians are now making it a study to find out how best to save valuable life from evils of whatever sort. What shall we do about the matter of suicides? At least half a dozen have occurred among those with whom I am personally acquainted, within my recollection. Is it a disease of the body, or disease of the mind? or are they so intimately connected that it is hard deciphering which? It has been said, that when one once undertakes such a thing, he never gives it up until, sooner or later, it is accomplished. I am glad to be able to say, such is not always the case. I recall to mind one friend who had got to such a stage of the disease that he would hunt the newspapers to find reports of suicides, and argued that one might commit the act, and still be a Christian and be saved. From what I have told you, you can well see that the reports of our newspapers would be the worst thing such a person could possibly read. How was his life as a Christian at that time, do you ask? It was by no means in keeping with the sentiment of our opening text. But I am glad to tell you, that by the influence and prayers of kind friends he was made to see his error, and afterward died the death of a humble, patient, trusting Christian. Reader, when you see a friend die a quiet, happy, honest death, don't ever more repine. Bear in mind, there are other calamities sadder than this.

Let me tell you another little story. One who stands very high now as a scholar, and has plenty of offers of places with a salary up into the thousands, told me but a few days ago that he once passed through a very great trouble while in his studies at college, because his mind became affected in a queer way. He seemed, right while enjoying good bodily health, to lose the power of mental effort. In trying to describe the sensation, he said it seemed as if his brains had been "scooped out," and the cavity filled up with mud. The prospect before him of becoming an imbecile, and dragging out a weary life of say fifty years or more, in some infirmary or asylum, was more than he could stand, even if he was a Christian, and studying for the ministry. Any thing but such a fate, in place of the bright ambitions of youth. After a season of the worst real trouble he had ever known, and a long hard struggle to say, "Thy will, not mine, be done," he finally got down to where he could tell God he was willing to be an idiot all his life, if there was no way of averting it, and then he was saved. Feelings of joy and peace came instead of worry and despair, and this in itself was a wonderful help in the way of recovery, as any physician will readily understand. I tell you, my friends, rebellion against God is one of the worst sins a mortal can commit. This man gave up his studies, and, with the calmness of a little child, went home to work on the farm. In a short time he was back, and all right; but he had received a lesson that will last him through life, and he has been the greater man for having had this lesson. That vain ambition of his boyhood is gone, and, no matter how high he may rise now, he knows that it is all in God's hands.

He had been taught, by a very plain lesson, that it is not only the very breath we draw, but that even the very thoughts we think are in God's hands; without his permission we could not even think at all; but with his permission, we are permitted to choose between good and evil, and submission or rebellion. The will power lies in our hands, and it is in this that we are created in his own image.

Now, dear friends, when I speak of the dead, it is with reverence and respect; and in pointing out to you the moral of this sad lesson, I do it with a feeling that, if my friend Albert were present, he would tell me to do it for the sake of the youth yet living. By turning back to the extract in the opening of this talk, you will see he closes with these words:—

I have lived a quiet country life on my father's farm for twenty years; but that life is at an end now, and time is precious.

Beware, boys, how you ever let an idea creep into your mind that you are above the station wherein God has placed you. The young minister was rebellious at the thought of leaving his studies and going back on the farm; but when his rebellious feeling was put down, and he could say, Though he slay me, yet will I trust in him, there came a great flood of happiness in upon him, and he took a great step up toward God and heaven. I talked with Albert several times about this; but he insisted that if he ever did any thing in this world it must be something large. He once wished he was rich; but I told him that money left to him, that he had not worked and earned by hard labor, I should fear more than any thing that could possibly happen, to one like himself. He smiled at my strange ideas, and said he would like to try it.

I talked to him freely in regard to the matter of suicide, and told him, one evening, while we were alone, that one who should commit such an act was for ever lost; that, in the nature of things, he by the act gave himself into Satan's power. This, of course, could not apply to one not responsible. His reply was either evasive, or he made no reply. He seemed pleased with his work, and with his shopmates, and he rather enjoyed heavy muscular work. When the rest of the hands were carrying bags of seeds up stairs, one bag at a time, he would toss two bags on his shoulder, and march up stairs as though he enjoyed it. When he indulged in his gloomy moods it always seemed to drive him away from his religion, and there seemed to be with it a sort of rebellion against God. He seemed to be quite a way off from the spirit of "though he slay me, yet will I trust in him." His brother and I urged him to take part in our young people's meetings; but we did not succeed in getting him to do so until he went to Oberlin.

I believe his countrymen are, as a rule, noted for their energy and indomitable will. It is this energy and will that has hewn down forests, and tunneled through mountains; but the will must first be under proper subjection, and be taught obedience to proper authority, or it is like the fire that warms your homes; without restraint, it ends in death, instead of being a life-giving power. Albert had a will of his own; but I fear it was not a very submissive one, even when in his right mind. I told you he used to ship goods for us. After he had made a good many mistakes, I told him he must not send out any more, without bringing them to me to inspect. I soon found he let them go as before. When I remonstrated, he said he knew they were right, for he went over them several times. As mistakes were still reported, I finally told him he must not send out an article, until I had seen it. He kept on, and, when questioned, was stubborn and silent. I sat down and talked with him about it, made him smile, and made him talk. He gave as a reason for refusing to do as I wished, that, when it got so he could not put up goods without somebody to look them over, he might as well quit doing any thing. I called in his brother, and went over the whole ground with him. I told him all our packers had their work inspected, and it might take him years to learn to avoid the mistakes always made by one inexperienced in any business. He said he would do as I said in any thing else, but would not this. Had it not been for his affliction, I should have had to let him go; but as it was, I concluded to give him some other work. As we dropped the matter, I told him I feared the position he there so stubbornly held to would be, in the end, his ruin. I told him I was obliged to obey orders from my customers, or it would cut off my own bread and butter, so that when we got so we refused to obey those we were working for, we were pretty sure to very soon refuse to obey God, and the end was Satan and eternal ruin. He smiled, and said something to the effect that he would take the chances. I believe that, as a rule, insanity is often accompanied with stubbornness. Perhaps it is beyond the power of man to tell which is the cause and which the effect in certain cases; but in any case, we can see clearly the importance of a humble and obedient spirit. A bee-friend once came to see me, whose mind, I was told, was affected at times. I was surprised to find him a man with most unusual powers and learning. I could see no trace of any thing wrong on any subject. One day, when out in the open air, we got to discussing the respective merits of slates and queen-cards, to hang on the hives. I argued my side of the question until I saw he was getting stirred up about it, and thought it wisest to stop. I felt a little hurt, too, at the vehement way in which he objected to my opinions. All at once his manner changed, and he said, "Forgive me, friend Root; you are right, and I am wrong; and I am more wrong in allowing myself to get disturbed by so simple a matter. This is the trouble with my mind, and, dear friend, I beg of you, when you see me getting excited as I was just now, please lay your hand on my arm and bid me be careful."

The good old man preached us a most excellent sermon on the next Sabbath. He knew the weakness of his own afflicted mind, and yet, even out of that affliction he arose as one who "ruleth his own spirit." Truly, truly, the work is a greater one than that of one who "taketh a city."

Help us, O God our Father. Thou who knowest the hidden thoughts of us thy creatures, as well as all the secrets of the universe, to thee we come. Help us to realize our weakness, and help us submissively to acknowledge thy greatness. Help us, in pursuing the paths which thou hast lovingly made for us to walk in, not to forget that thou art supreme, and ruler over all. Help us to remember with thanksgiving and praise these lives thou hast given us, and keep us from all temptation to doubt or complain, when we meet with trials, or with experiences we can not understand. Help us to remember that thou, and thou alone, givest life, and none but thee hast right to take it away. Give us that reverent and trusting spirit that will say with thy servant Job, "Though he slay me, yet will I trust in him."

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, FEB. 1, 1883.

Why art thou cast down, O my soul! and why art thou disquieted within me? hope in God: for I shall yet praise him, who is the health of my countenance, and my God.—Ps. 43: 5.

We have now plenty of beeswax, but had to pay "right smart" for it. See what we now offer on page 54, cover.

Who has any spider-plant seed for sale, and what will they take for it? It seems funny if we can't get seed enough, as easily as this is to raise and gather.

Our subscription list has gained, during the last month, about 1200 names, so we now have altogether 4832 subscribers. This number, thus early, indicates we shall go far above any former year. Thank you.

Express money-orders are proving a very sure and cheap way of sending money; but where you can, friends, please make ours payable to the Union Express Co., as that is the only express company we have.

In referring to pages in Gleanings, the current volume may be understood where none is mentioned; otherwise the year will be given. Thus, "p. 425, 1881," can be as easily found as "p. 425, Sept. No., 1881." In ordering a number containing any particular article, the page, month, and year may be given.

Our friend Horace Libby, of Lewiston, Me., sends us some beautiful plain drawings for a honey-house, that would do credit to any architect; but I am sorry he has taken so much time on it, before we really any of us know just what we want. I fear it is going to be something like our dwelling-houses. There are no two people in the world who want houses exactly alike.

In our Jan. No. I advertised perforated zinc honey-boards at 25c each. I fixed the price after having imported my zinc, and paid all charges. After the journal had gone out I received a second claim for more duty on the zinc, claiming it was *manufactured* instead of *sheet* zinc. The difference on the quantity we imported amounted to more than *a hundred dollars*. In consequence of this I have been obliged to charge 30 cts. instead of 25, to cover the actual cost of the honey-boards. I dislike to advertise goods, and then ask for more; but under the circumstances it is the best I can do to save myself.

Many of the engravings we give you in Gleanings are very expensive, and I have for some time been a little undecided as to what I ought to do about lending them. As all of the finest ones are almost in constant use in printing our A B C book, about the only way we can do when we lend them is to get new electrotypes made. Of course, we can not well afford to do this without pay. Now, in thinking it all over we have decided to lend no cuts to any one; but to accommodate, we will sell electrotypes at the usual price of 25 cts. per square inch. This, of course, is but a small part of the original cost of the picture.

It has always seemed as if those who send us very large orders should have a little better rates than those who order only one article at a time, or, say, a dollar's worth of goods, or such a matter. Well, the truth is, friends, I have figured many articles down so low that there is hardly room for any discount at all, especially those sold at ten and hundred rates. However, we have decided to make a discount of two per cent on all cash orders of $50.00 or over; three per cent on $100 or over, and five per cent on orders of $500 or over.

YOUR OWN NAME.

Never be ashamed to tell who you are. There may be circumstances under which it may be right to take an assumed name, or at least there are some people who claim there is; but I tell you, friends, when the time comes that it seems expedient to conceal your real identity, then is the time when you want to look out that you are not being led by Satan instead of God. I have just been told, in a private letter, that a prominent bee friend visited us, and stayed some time, going all over the establishment under an assumed name. The excuse given was, that I might charge him more for beeswax if I knew he was running an opposition fdn. factory. Is it possible any of you should think I am so afraid of opposition as that? If you want to go into the same business, come and look us all over; take measurements of every thing, and, if you wish, we will help you build your machinery, and give you the best advice we know how to give. It is just what we are doing every day. Do you think we shall suffer or lose, or lack business and work? "In my Father's house are many mansions. If it were not so, I would have told you." Even were it possible for some one to steal and carry away my business, they could not take away my faith in God. Is not "the life more than meat, and the body than raiment"? Another thing: Some of our bee circulars hail from apiaries with some high-sounding name, with somebody's name appended as *agent* or *manager*. Don't do it. Aren't you always "*manager*" of your own business? In business circles it is getting to be pretty well understood that all these obscure ways of doing are some sort of a dodge to evade payment of just debts. The institution orders goods, and, when payment is desired, the man who made the order says he is only the "manager," and thinks it ridiculous that you should think of holding him responsible. If your name is John Smith, put John Smith to the end of every thing you write, and then bend the energies of your life toward making the name of John Smith as good as the gold, so that all men may pronounce it good, at sight. Young man, *never* let the time come when you shall be afraid or ashamed of your own name.

CIRCULARS, ETC., RECEIVED.

Von Dorn, Omaha, Neb., sends us a 4-page list of apiarian supplies.

J. V. Caldwell, Cambridge, Ill., has sent us an 8-page list of "Supplies for the Apiary."

D. S. Given & Co., Hoopeston, Ill., have issued a pretty 20-page pamphlet relative to the "Given Fdn. Press."

J. S. Tadlock, Luling, Texas, sends us an 8-page "Price List of Bee-keepers' Supplies."

G. W. Baker, Lewisville, Ind., sends us a fine 8-page price list of bees and poultry; 6 x 8.

Chas. J. Van Eaton, York, Livingston Co., N. Y., sends us a pretty 4-page list of "some of the implements" used in the apiary.

P. L. Viallon, Bayou Goula, La., has just received from our job rooms an 8-page list of every thing pertaining to his extensive apicultural business. Send for one.

E. T. Flanagan, Belleville, Ill., always up to the times in progressive apiculture, has kept our big press busy for three days last week on his new Catalogue for 1883. It will pay you to get one. The new firm is Flanagan & Illinski.

Friend Muth sends an interesting supplement to his 1883 price list. It seems he has, on the first cover, finally perceived the merits of the Simplicity hive, and gives us Blanton's Simplicity bee-hive. He also makes a reduction on honey-jars.

L. E. Welch, Linden, Mich., has just received from our job-rooms a very tasty 6-page price list of bees and supplies for the apiary, 5 x 3.

F. Boomhower, Gallupville, N. Y., has also issued his price list of clamps and bees, in just the same style as the above, and from this office. "George the jobster" is now fairly reveling in new material, and is prepared to "throw" himself on the daintier class of job printing which is now so rapidly coming into favor among bee-men.

Friend Hayhurst sends us his neat little postal-card circular, from which we extract the following, which sounds "just like him:" "I guarantee safe arrival. If the bees reach you in bad condition, please send me, immediately, without affidavit or dead bees, your simple statement of the matter, and I will try again, or promptly return your money. I do not know that I have a single dissatisfied customer; but if there are any such, and they will write me in regard to the matter, I will do the best that I can to render satisfaction."

MRS. LIZZIE COTTON'S CIRCULAR.

I am being asked my opinion of the new circulars Mrs. Cotton is again sending out quite plentifully. The statements she makes, and the prices she charges for the goods she sends out, would, in my opinion, forbid her being classed with our regular supply dealers, to say nothing of the strings of complaints against her that have filled our bee journals for years past.

CONVENTION NOTICES.

CALL FOR A CONVENTION.

The bee-keepers of Northeastern Michigan are hereby requested to meet at the Dayton Hotel, in Flint, at 10 o'clock A. M., on Tuesday, Feb. 13, 1883, for the purpose of organizing a bee-keepers' association. All bee-keepers are earnestly requested to come, and bring with them any apiarian articles of interest that they may possess. A free room, and reduced rates of board, have been secured.

W. Z. HUTCHINSON.

The Tuscarawas Valley Bee-Keepers' Association will hold a called meeting in Town Hall, Coshocton, O., on Feb. 14th, 1883, at 10 o'clock A. M. Every one interested in bees or honey is invited there. Come prepared to make a report of the bee business for the past year. Bring or send any thing pertaining to the business, and let others see it.

J. A. BUCKLEW, *Sec'y.*

DOOLITTLE SAYS,
STANLEY'S VANDERVORT FDN.
IS THE BEST.

We can fill orders at once for a large amount of our celebrated foundation. Also any thing wanted by bee-keepers, at factory prices, or lower.
Send for Circular.
2d G. W. STANLEY & BRO., Wyoming, N. Y.

IF YOU WANT A
HORSE POWER,
Don't make or buy one until you have sent for a Circular describing the WARREN POWER, to
2d W. C. GILLETTE, LeRoy, Genesee Co., N. Y.

NORTHERN GROWN
SEEDS, PLANTS, VINES, BULBS, ETC.,
at growers' prices, grown at my seed farm, fruit garden, and apiary. Descriptive catalogue free.
Address JOHN H. MYERS,
1-2d Saratoga Springs, N. Y.

1883— —1883

WANTED.

ORDERS FOR EARLY ITALIAN QUEENS!

Three fine imported queens, to breed from, and 80 colonies of Italian bees. All will be devoted to queen-rearing. Single queen, $1.00; 11 for $10.00. Send for catalogue of Bee "fixin's." Beeswax wanted.
J. S. TADLOCK,
2-12d Box 42, Luling, Caldwell Co., Texas.

WANTED.

Two young men to work in Apiary and Nursery.
2-3d S. I. FREEBORN, Ithaca, Rich. Co., Wis.

HIVES, SECTIONS, &c.

Langstroth, Simplicity, and other hives.

The Lewis One-Piece Section.

The Lewis Two-Piece Sections.

We make the one-piece, two-piece, or four-piece dovetailed or nailed Sections, any size, from half-pound to 6x6x2 inches, or any other SUPPLIES for Bee-Keepers, made of wood.

4¼x4¼ of any of the above kinds of sections, -	$4 50
All other sizes, larger to 6x6, - - - - -	5 00
Half-pound sections, - - - - - - -	3 50

Send for Price List and illustrations of our NEW HIVE for comb honey—something new, just out. Price Lists will be sent only to those that write for them.
G. B. LEWIS.
Watertown, Jeff. Co., Wis., Feb. 1, 1883. 2tfd

HEADQUARTERS IN THE SOUTH

FOR THE SALE AND MANUFACTURE OF

BEE-KEEPERS' SUPPLIES

Root's Simplicity, and V. D.-N. hives, frames, sections, foundation, etc.; Italian queens and early 4-frame nuclei a specialty. See advertisement in January, 1883, GLEANINGS; and for further particulars, send for my Illustrated Catalogue.
25 cents cash, or 27 cents trade paid for beeswax.
2tfd **P. L. VIALLON, Bayou Goula, La.**

BEE KEEPERS' GUIDE

28 Pages, 50c. per year.
SPECIMEN COPY FREE.
2-4d **A. G. HILL, Kendallville, Ind.**

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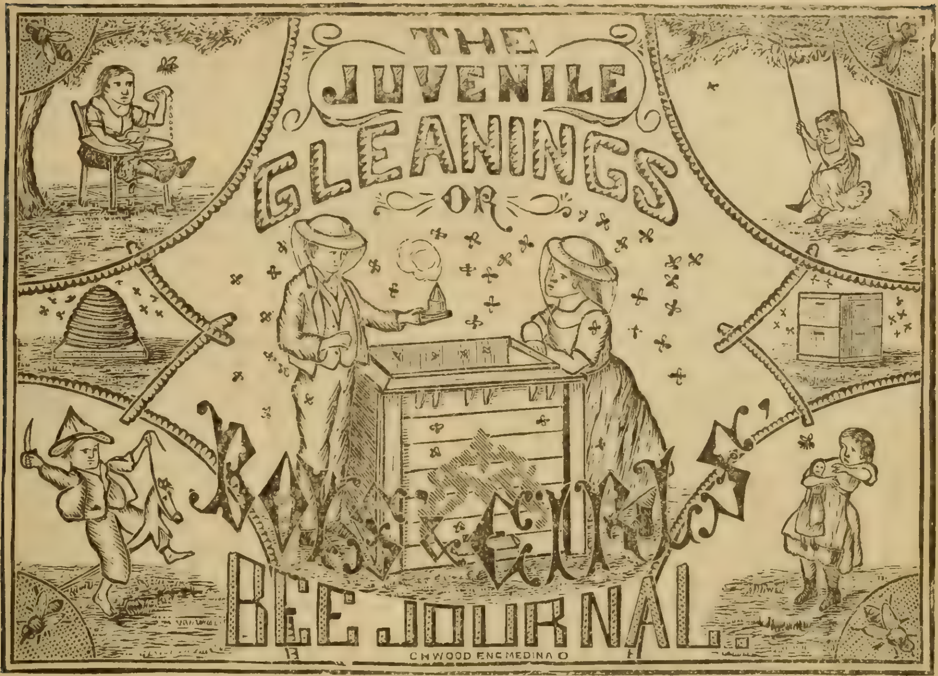

He that is faithful in that which is least, is faithful also in much.—LUKE 10 16.

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MYSELF AND MY NEIGHBORS.

With what measure ye mete, it shall be measured to you again.—MATT. 7:2.

I AM not going to talk about bees to-day, children; I am going to talk about crickets. Do you know what a cricket is? I guess almost all of you have seen crickets, haven't you? They are long black bugs—are they bugs? Well, I don't know what else to call them, but may be Professor Cook will tell us some time, whether they are bugs or not. They have wings, I know, but I don't think they often use them. They have long feelers, too, that they wiggle about in a funny way when they walk, as if they couldn't see very well, and so were trying to "feel" the way, as it were. Did you ever hear a cricket chirp? I have, and that is why I remember them so well; for a great many years ago, when I used to go down to grandfather's, I always used to get homesick every night; and when I was homesick it seemed just as if the crickets were all looking right at me, and piping and chirping at me just because I was homesick, and they wanted to make me more so. Their chirping is always dismal to me ever since, and I always want to chase them whenever they crawl out of their holes after a hot summer day, and commence their sort of grating chirp. Come to think of it, I don't believe it is so very dismal lately, after all; for I know now that it is a kind of song of theirs, and they only do it when they feel happy, just as the birds and frogs and tree-toads, and all of the insect tribes, tune up their songs; and while I think of it, I am rather inclined to think it is the way they have of praising God. If this is so, surely their little songs ought not to be dismal or distasteful to us. When I used to be in the "hen business" I used to sit for hours and hear my old hens sing. Did you ever hear a hen sing? Well, if you didn't, just ask your mother to tell you when one of your hens is singing, and see if you can't discover a melody in it. When a hen sings, she almost always lays an egg every day, and so pays for her food and lodging. Folks that sing about their work are usually the ones who are doing their duty, and paying their way, and the consciousness of this makes them happy, and, therefore, they sing.

There is a deal of singing in this world we never hear, just because we don't understand it. We get cross at the frogs because they croak and keep us awake nights; and yet the whole truth of it is, I suppose, they are only holding a frog concert, or something of that sort, and we in our selfishness don't understand it. Now just you look around you, and see how many of God's creatures are singing praises to him because they are happy, and yet we never thought of it.

Well, I declare! I told you I was going to write about crickets, and then I got off and wrote about hens, and finally ended off with something about singing. Come to think of it, it wasn't *crickets* that I meant, either. It was critics. Critics; crickets; critics; crickets. Did you ever hear of anybody who got the two words mixed up before? I did. It was a boy who was speaking a piece. He meant to say,—

You'd scarce expect one of my age
To speak in public on the stage;
And if I chance to fall below
Demosthenes or Cicero,
Don't view me with a critic's eye,
But pass my imperfections by.

And he did say, in winding up,—

Don't view me with a cricket's eye,
But pass my imperfections by.

Well, now, children, a critic is not an insect at all. It is a person who makes it a business to look over and read, or "review," as it is called, the books and papers and articles that come out. You see, there are so many nowadays that nobody can read them all, and so we are very glad to have somebody tell us what ones we shall read, or what ones it will be most profitable for us to read. I presume you know that even our Sunday-school books have to be reviewed, and good wise Christian men and women are employed for the purpose of deciding what books are best, among the great numbers we have now to choose from. Literary critics are employed by our leading literary papers or magazines, to look over, or review, the new books as they come out, and they serve as a guide to the great masses of the reading public, to tell them what books they had best buy, and what ones they can not afford to waste time over. Do you not see, children, how very important it is that a critic should be not only wise, but kind, and free from any little spites or jealousies? Suppose the teacher should some day at school appoint you as judge as to whose essay or declamation was best, and you were satisfied that John Smith's was really ahead of any, but that you decided right away you wouldn't give it to him, because he pushed you off the sidewalk the day before. Would you be a just or an honest critic in that case?

You may say that the teacher has not appointed you as critic; but, my little friends, most of us have a way of appointing ourselves critics, and giving our opinions pretty freely, not only about declamations and essays, books and papers, but we set ourselves up as critics as to how people should dress, what they should say, and, in short, we often pick them all to pieces, you might almost say; and I am afraid, too, that we pick them to pieces, not to find all the good we can, but to pick out and hold up their faults. Children, do you ever talk about your neighbors at your house? If you do, is the talk something you would be glad to have them hear, if they should happen to be passing by the window at the time? What is the reason we take more pleasure in talking over people's bad qualities, than we do in speaking of their good ones? Or if we don't take more pleasure in it, why do we do it? Here is a little editorial I have recently clipped from the *Sunday-School Times*:—

In order to show yourself to advantage as a critic, you need to watch for the good things that others would overlook, and hold them up to view, in your comments on what you have seen or read, or on one whom you have observed. You really disclose yourself, in all your criticisms on persons and things. Any nobleness there may be in you will show itself in your quick recognition of nobleness anywhere. Any littleness in your nature will show itself in your ready fault-finding.

You see, children, if you see noble things in those about you, it is because you have noble qualities yourself; and if you are all the while seeing little and mean things in the neighbors and friends around you, it is because you are little and mean yourself; or perhaps I should say, because *we* are little and mean *ourselves*. It is true, I know it is true, and it not only makes me feel sad and sorrowful when I think about it, but it sometimes almost makes me feel sick, because I am so much more apt to see people's faults than to see the good and noble traits there is in them. Children, it hurts anybody to talk about people, and make fun of their weaknesses or infirmities. It hurts us very much as it hurts us to say bad words; and if we persist in it, we shall surely have much trouble and sorrow. The next time you feel bad and gloomy and unhappy, just think back, and see if you have not been saying hard things about somebody. I am going to pray to God most earnestly that he will help me over this very, very bad habit, and also that he will make me to love the neighbors all around me, instead of letting any sort of hard or unkind feeling come into my heart toward them, even if they do sometimes do wrong and sinful things.

"With what measure ye mete, it shall be measured to you again." That is what a man said who is going to draw me some wood. He said he always gave a good full cord, because he wanted God to measure out mercies to him in that way. And I have been thinking that, if we talk hard about people, our conscience will be pretty sure to talk hard about us. I was going to tell you more about my neighbors here in the factory, and the way we do things; but I talked so long about crickets and hens and singing, and other things, that I shall not have any room left. Besides, we have a larger stack of children's letters than ever before, and I wish to give them all a place. That talk about critics has made me feel rather sad; but at the same time I begin to feel happier, and I know I shall be a great deal happier, if I only profit by my own little sermons. Now let us all keep a careful watch on these tongues of ours. "Forgive us our debts as we forgive our debtors."

VIRGIL'S TREATISE ON BEES.

CONTINUED.

THE good editor has my thanks for the kind reception of last article, and the invitation to put in plenty of notes. If I give way to all the chat that I feel inclined to over Virgil's interesting points, I reckon the editor will soon have to put on the brakes a little.

WATER FOR BEES.

And where their drinking-place the bees shall will,
Whether the water flows or standeth still,

Place in great stones, and willows thence to land, (1)
That on these bridges bees may crowded stand,
And spread their winglets in the summer sun,
If luckless chance befall some lingering one,
If rough east wind should sprinkle them with spray,
Or headlong plunge in dangerous Neptune's way. (2)

PLANTING FOR PASTURAGE.

About these places there should freely bloom (3)
Green cassia, and in fullness of perfume
Wild thyme; and in abundance should there be
The strongly breathing flowers of savory:
Let violet-beds adown the mossy side
Drink deep the hidden fountains as they glide.

HIVE-MAKING.

Moreover, then, the subject to pursue,
Whether the hive itself be made for you
Of the carved cork, (4) or willows woven o'er, (5)
A hive should surely have a narrow door; (6)
For winter hardens honey with its cold:
Melted with heat, it can not be controlled;
And thus 'tis plain, excess in each of these
Alike is to be dreaded by the bees:
And not in vain they stop the holes with wax,
And fill, with mortar from the flowers, (7) the cracks.
The glue collected for this special use
Is tougher yet than birdlime's sticky juice,
And firmer holds the ramparts of their lair
Than Ida's pitch which Phrygians prepare.

NATURAL HIVES.

And oft, indeed, if common fame be true,
Under the earth in caverns hid from view (8)
Their household gods they worship and embrace,
And live and thrive, and propagate their race.
Deep hid in hollow pumice stone profound,
And eaten cavities of trees they're found.

WINTERING, AND IMPORTANT MAXIMS.

Look to their chinky chambers in due time,
And plaster well around with yielding lime:
Put loosely o'er a mass of forest leaves,
While roof of yew the winter rain receives. (9)
Trust not your hives by marshes on the coast,
Nor on the hearth the reddening lobsters roast; (10)
Nor where bad smells arise from filthy mire;
Nor where the concave rocks aloft retire —
Each airy pulse such rocks return in sounds,
And startled echo of the voice rebounds. (11)

Right here, to take the eleventh note first, is something of first-class scientific interest. There is an unsettled question whether or not bees have the sense of hearing. If, as Virgil asserts, they do not thrive when placed in the focus of an echo, that fact looks like tolerable evidence that they can hear. It is not very likely that the thing is a mere whim: very possibly it may turn out a fact. Who that has a rocky concave with a strong echo will investigate and report? Some of the children will be surprised to hear that bees are accused of being deaf. Sir John Lubbock played a fiddle within an inch or two of them, and they wouldn't waltz, wouldn't even beat time: didn't even care enough about it to try the key of *one sharp* on him to make him dance.

(1) Now, dear Novice, don't get huffy; this plan of watering is ever so much better than yours in A B C. I've tried that till I've got sick of it, and quit. More than three-quarters of the bees will go to a place of their own choice, and get water that is freshly filtered through cool mud. The few that did come around my jar were mostly after salt, I reckon. Warm water on a wooden board in the sun is a breeding-place for microscopic vegetation, and "leetle, teenty animiles" to give the bee-babie worms, I believe. The willows would impart some of their own quality to the water, if the bees chose to take water from the middle of the bunch. Virgil's plan, as I understand it, is to put in two big stones, out where the water is nearly a foot deep, and then a big bundle of willows between the stones and the shore, fastening the ends with stones so they can not float away.

(2) This sounds just like a kind and wise man who does not want the poor bees to be drowned, as they very often are when their drinking-places are not improved.

(3) Lots of honey-people have tried a few honey-plants—and complained of naughty bees that would not notice the new posies at all. This is often because there are so few flowers of a kind; and possibly sometimes because the bees don't find 'em. Virgil's hint is, put your honey-patch right where the bees go to drink, and then they'll surely find it. And the plants themselves will not fail to secrete honey for lack of moisture.

(4) Cork is the very best material for the wall of a bee-hive, it is so dry and warm. In all the centuries since Virgil wrote, no one has contrived any thing better.

(5) Willows, of course, formed the cheap hive of the day. It strikes me that willow skeps must be better than the straw ones they use in Ireland and England.

(6) That, dear Virgil, is about the way I used to talk. But grim Death and old Boreas are a pretty strong span of lawyers, when they both get to arguing on one side of a case; and they argued with me till I gave up the narrow door for wintering my bees. Go, talk to Mr. Root; may be he has been ventilating some of his weak swarms to death this very winter.

(7) From the flowers, eh? We all put it down, that propolis is gathered from leaf-buds; but, come to think of it, I dare say the bees get most of their supply from flowers and flower-buds. Some flowers, sunflowers, for instance, have so much resin that your hands will be dreadfully sticky after handling one.

(8) O Virgil! how could you be so unkind as to spoil all my chance of getting a patent on my hole-in-the-ground colonies? Haven't told GLEANINGS any thing about them, have I? I got scared out — afraid the editor would make a wry face, and head it off, "Another one of friend Hasty's *fancies*."

(9) The man who can give a better method than this, for wintering a skep hive out of doors, had better hold up his hand, else Virgil "takes the cake." Plaster the old thing with lime mortar (early enough to have it get thoroughly dry, of course) then bury it in leaves, and shed off the rain with a substantial board cover.

(10) This is quite curious. There is no handy way to kill lobsters; so they are often put on to cook while yet alive. Evidently the Roman peasants had a superstition that the bees would resent such cruelties, and refuse to prosper where such deeds were done. Not the worst superstition in the world, was it? By putting these two cautions so closely together, Virgil indicates his own belief that it was the contiguity of the coast marshes, and not the sufferings of the poor lobsters, that made bees unprosperous. Of course, the people remote from the shore wouldn't have live lobsters to roast.

Richards, O., Feb., 1883. E. E. HASTY.

Well done, friend Hasty. I think we may all feel happy in having such an able translator, and one with the real heart and spirit to make bees and Latin "connect." If you will excuse me, friend H., it seems to me you have not laid stress enough on this matter of covering the bees with forest leaves. In that line,—

Put loosely o'er a mass of forest leaves,

he has given us the plan followed by the Dadants, exactly, and I am inclined to think that no better covering for the frames has ever been devised. We have had ample proof, you know, that bees have wintered in hives very open at the top, where they did not when well packed in chaff. *Loose* leaves seem to be just about what is wanted; and if I do not change my mind, I am determined, next winter, to try filling the upper story of some chaff hives with loose forest leaves, and nothing more. Would it not be funny, if we should take Virgil, in place of all modern writers, on this matter of an absorbent over the frames?

FIRES.

MRS. HARRISON TALKS TO THE CHILDREN ABOUT BEING CAREFUL.

It has been a very cold winter, and I have thought a great deal about fire, and the last month more than ever. I shudder whenever I think of the burning of the Newhall house at Milwaukee, Wisconsin, where seventy-five persons lost their lives. Men, women, and children burned alive! how fearful!

We should all be very careful about fire. In dry hot weather, sometimes the grass is of a brick color, and crumples under my feet, and then I'm afraid to light a smoker to quiet the bees. I like the bellows smokers, because we can smoke our bees with so much more safety than in the old way. I got on fire once, whilst smoking the bees with a pan of chips; and if I had been alone I might have burned up, and the bees and our house too. But, providentially, my husband was at home, and put out the fire.

Now, children, while you are young, and your habits are forming, you should cultivate *carefulness*, and that attribute called "presence of mind." When you are in danger, if you do not get excited, but keep calm, it may save your life.

Mr. Edison is a great inventor, and has found out a great deal about electricity, and has taken out more patents than any man in America. Since the Newhall fire, I have wondered why some one of inventive powers does not construct a ladder in sections that could be carried on the firemen's hose-cart, and shot out against a building. Persons have been rescued from a sinking ship by a line being shot over a vessel, and it seems terrible that people should be burnt up, for want of a ladder to reach them. Why don't some of the bee-keepers who have such a fancy for getting out patents get up a ladder for our use? Bees cluster pretty high, sometimes, and I've always expected to tumble, and get badly mixed up with a swarm of bees and a basket or dish-pan clattering about my ears. It might be fun for those who look on, but I don't believe I should enjoy it very much. Do you think I should?

Peoria, Ill. MRS. L. HARRISON.

There are a multitude of patent rights, my friend, for fire-escapes, as they are called, and our friend Oldroyd, who makes the ink, "W. O.," you know, has just got out a new one. It is made to slip on a rope; and although he is an old man, he says he can come down from a five-story window in just half a minute. These machines may save much valuable life; but at the same time, I think our houses should be so made that one can easily get out, in case of fire. It was on this account, for one thing, we have a back stairs to our new house, as well as front stairs.

DOORS.

A LESSON TO BE LEARNED FROM THEM.

It makes but little difference to us about the beauty or polish of our doors, if they fail to perform their duty of opening and shutting at our pleasure. If they don't do this we go to work with hammer and saw, with chisel or plane, or whatever instrument will best serve our purpose, and in the end that door is brought to "its senses," as it were. In some such way the Lord deals with his children. "Whom the Lord loveth he chasteneth."

Doors were not made to be banged and beaten and scarred; they are weak and inoffensive; and however much they are defaced by abuse, they are gentle and uncomplaining, ever ready to have their "faces washed," and, if need be, scrubbed and painted and varnished. Now, don't slam the door. Do not abuse it; and don't leave the door open this cold weather, for some one to get up and close.

Don't open the doors of all houses, especially *ale*-houses.

Let *your* door be open to the poor, to God's children, and let the door of your hearts be open to receive every good impression, and closed against the many sins that would enter. As you open the door of this new year, drive out the little foxes of sin, and, turning your back on Satan, enter into the fold of Christ.

If any one should be so bold or so wicked as to try to come in at the window, or to make an opening in our houses where it might seem more convenient for them to enter, we would treat them as the law would allow. Jesus says, "I am the door; by me, if any man will enter he may come" into a place of safety. Let us not try any other way, or we shall be classed with the "thieves and robbers," who are never safe, neither here nor hereafter.

Anderson, Ind., Feb., 1883. E. MOHAN.

ABOUT THINGS THAT GROW.

SOMETHING FOR LITTLE FOLKS TO HAVE AND TO LOVE.

My pa doesn't keep bees; but mayn't I come and see you? I wonder how many of you have flower-gardens, all your own. And what flowers do you have in them? Did you ever sow seeds in the house, and do you know how interesting it is to watch them sprouting, and then growing day by day, so tender and velvety green? And do you wonder, when the first two leaves are grown, what the next will be like? Did you ever see "Mollie Heath" poke her brown hood above the soil in the pot, and try to push her back again (as I did), thinking there was something wrong? You see, she comes up the way the beans do; and, by the way, I know a man who saw that his beans were just up, shell and all, and went and pulled them all up, and planted them again with their roots in the air. But he was not a farmer nor a bee-keeper.

If you want something pretty in your yard, get your pa to saw off a nail-keg half way, and set it on the cherry-tree stump. Bore a couple of small holes in the bottom, and put in a layer of cobble stones for drainage. Line it with sods from the meadow, and fill up with rich earth, putting in such fertilizer as you wish. Plant a small wooden ladder in the center, and put in one or two plants of the Kenilworth ivy, also called "love in a tangle." Give it plenty of water, and it will reward you. One day in hot weather I saw a bee hover over mine and crawl away under to a large leaf full of water, which she drank in as though it were honey. Did you ever see a bee drink? But the prettiest vine for the shade is the maurandya. This grows easily from the seed. One plant will nearly fill a window. It does not twine, but climbs by its leaf-stalks, which twist around a thread once, holding firmly to it. Both of these grow nicely from slips. I should like to tell you about *my* flower garden, but I am afraid Uncle Amos will think *this* bee is not after honey. So, good-by. BEULA A.

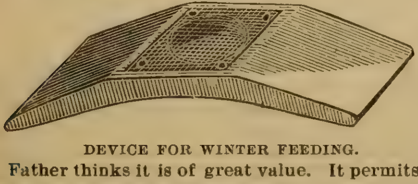
A STORY WITH A MORAL TO IT.

DOES IT PAY TO FEED? AND WILLIE'S DEVICE FOR WINTER FEEDING.

MY father used to take GLEANINGS; but in going to the public library he found it contained all of the bee-books, including your valuable A B C in bee culture, so he concluded he had enough to read for at least one year. As my father is employed in the Peoria postoffice, and as I frequently go there, I saw, at one time, your JUVENILE; and, not seeing the report of this part of the country, I will send you ours for the last season:—

Having two swarms to start with in the spring, and, the season being very backward, wet, and cold, father was compelled to feed his bees until about the first of June, so as to keep them from starving. As he had fed his bees with three dollars' worth of A sugar, mother often wanted to know how he was to get back his money for the sugar he fed. But as white clover opened, and, having the bees strong in numbers, they gathered honey rapidly. We received over 200 lbs. of comb honey, and sold $40.00 worth, besides having all we wanted for family use.

The bees increased to five good swarms by natural swarming; I hived them, and father gave me one good swarm. Now, Mr. Root, I will send you one of father's inventions by this mail. I will not describe it, as you will see the model.



DEVICE FOR WINTER FEEDING.

Father thinks it is of great value. It permits the bees to cluster, or pass from comb to comb; and in spring, in feeding up stocks, having a hole cut through the carpet, where the wire screen is, it prevents the necessity of disturbing the bees. By taking a tumbler or fruit-jar, filling it with syrup, and tying a muslin cloth over the mouth of it, inverting the jar, it enables the bees to carry the syrup below.

This is my first letter, and I hope you will have a waste-paper basket large enough to hold all of this.

Peoria, Ill., Jan. 20, 1883. WILLIE DARR.

If I am not mistaken, Willie, more than one wife and mother—aye, and perhaps a few fathers too — have worried about the sugar it has taken to feed "those bees." In your case, I presume mamma was most agreeably convinced, and we can readily excuse her, for she probably had not learned what bees may do.—The device you send is substantially a Hill's device, made of solid wood, with a hole in the center, over which wire cloth is attached. This hole serves for ventilation, or for feeding. A fruit-jar, with cheese cloth over the mouth, may be inverted over it, and it can be put on and taken off without it being possible for a bee to get out in the way, to sting or get lost. There, now, Willie, it has just popped into my head, what it is we want for this purpose. It is a small wooden bowl, with a hole bored through the bottom, and wire cloth tacked over it. Of course, a hole must be made in the carpet or enameled sheet, to match the hole in the bowl, and then we have it. As a cluster of bees is usually a little oblong, I would rather prefer an oval bowl; but I presume it will not make very much difference.

THE AMERICAN BOY.

OUR PICTURE ON PAGES 164 AND 165.

BOYS and girls who take to bees are, as a general rule, if I am not mistaken, of the class who are a little on the line of inventive genius, and are, therefore, if I have rightly divined, about the sort who will be interested in our "big picture." The picture is a copy, reduced in size by the photo engraving process, of one that recently appeared in the *Mechanical News*, published by James Leffel, 110 Liberty Street, New York. Many of the scenes bring quite vividly to mind experiences of my own boyhood days; and as they come up, I think I will tell you a little about it.

The opening scene is, I suppose, with the clock. What enterprising youngster has not looked wonderingly at the curious machine which, almost like a thing of life, pegs on, and tells us the time? The first clock we ever had in our little household was a monster of a weight clock that I traded for. We used it, because Sue and I were saving carefully, and it saved the money a new one would cost. It answered the purpose nicely. Ernest got to be about as big as the urchin in the picture, when he one day climbed up just about as in the picture, opened the ponderous machine, but, pulling a little too hard on the door, it tipped forward and went over his head, weights and all, and "bake, bake, bake mamma's clock all to pieces." Mamma was so much rejoiced to find it didn,t "bake" the baby "all to pieces," she didn't scold very much. When he saw the ruin he had made, he ventured, "Can't papa fik es?"

The wind-mill must have been myself, for wind-mills were my hobby; and my happiness to sit and see them go, after they were all put up, was only equaled by my grief when some great wind blew them all to bits. One of my home-made ones, made of cloth and sticks, and bits of wire, churned the butter for a whole summer.

I, too, had the boating fever, but the boats were mostly built and launched by my brother, older. Some boys' boats are now slung up in the warehouse, away up under the rafters, and they have quite a likeness to the one in the cut.

Many of you know something of my first printing, and how the press was run by a wind-mill, after we got too many subscribers to print them easily by foot power. Scroll saws and amateur photographic outfits were things that came in vogue after my boyhood had passed. The same with the telephone; but my brother and I did start out to make a wooden locomotive, with an old stove-pipe for the boiler. The water-wheel was all faithfully worked out, and the saw-mill that it carried was the delight of the neighborhood. The same pond (built by much hard labor in carrying sods) that furnished water for the saw-mill, also carried the home-made boat; and didn't we find real happiness in the improvements made on it day by day? Sometimes some of the girls at school came over to see, and you can guess there were particular girls there in that old schoolhouse who had an especial interest in the affairs of certain boys; and when *they* admired the pond, the boat, the water-wheel, and saw-mill, I tell you but weren't we happy? Telescopes? It was I who was crazy about a home-made telescope when I was a boy; but it was the older brother who actually had one, and studied the heavens with it when he was a man.

Now I have talked about all except the grindstone. Did you ever see a boy grind his knife, when some new machine was to be builded? Isn't the picture an apt one? The chap with the knife is so absorbed in it he doesn't think that his younger comrade is getting tired; and while the poor little chap doubles himself up, in his weariness, wishing the other would get that "edge on it" pretty soon, he almost envies idle Fido, who has an interest *always* in what the boys are at work at. I can very well remember how I used to turn grindstone for father, and how I declared, mentally, I would some time have a water-wheel or a wind-mill that would make the pesky old grindstone go of itself, some way or other. Well, I guess we did, for now we have a great emery wheel that goes itself, and carries the knife back and forth, of itself too, until it looks as if it almost had sense and brains, as well as the rest of us. Don't you think this is a rather nice world to live in, children? I do, and I thank God to-day for wind-mills and water-wheels, boats and printing-presses, locomotives and telephones, telescopes and cameras,—aye, and for the bright go-ahead boys and girls who are day by day growing up and learning how to use them, and through them learning how to love the kind Father who gave them all.

JUVENILE·DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

> "A chiel's amang ye takin' notes,
> An' faith, I'll prent it."

I WONDER how many of our little friends know why they have lanterns that give a red light, on our railroads. Well, a red light is a signal of danger. When one train is ahead of another, it hangs out a red light on its last car, that the train behind may be warned of danger when they get in sight, and see the red light. If a bridge is broken down, or the track is out of repair, or any thing of that sort, a red light is hung or waved some distance before it that they may have warning so as to stop in time. Well, the idea has been suggested that we often need a red light to warn us to look out for certain things that are bad for us. One of our Christian papers has what it calls "red lights," to warn teachers and pupils, in studying Sabbath-school lessons, lest they get to arguing on doctrinal or other points, and so waste time uselessly. It is a rather sad matter to think of. but I believe even Sunday-school teachers do sometimes need a red light held up before them.

Well, now, I wonder if we little folks need any sort of a red light to be held up before us, when we are writing these little letters. Shall I tell you of a few things that I have to mark out very often in your letters, because it is something everybody knows already, or because you all say the same thing over and over too much? I think you won't feel hurt, if I do, will you? I am sure you will take suggestions from Uncle Amos, will you not? All right; here are the red lights:—

RED LIGHT NO. 1.

Do not say, "I thought I would write you a letter," when you commence. Just write the letter and that tells the story. Neither would I say, "I take my pen in hand," etc. Away back, when I was a little boy, we used to have a lingo something like this: "I take my pen in hand to inform you that I am well, and hope you are enjoying the same blessing." I don't mean there is any thing bad about it, but it is a very old phrase, and most people have seen it so many times they are very apt to laugh when they read it. In our office here I tell the girls to pitch right into business, and say what needs to be said, and not a word more; in fact, we don't even stop to say "mister" in our letters, but just commence and talk. You see, it takes time to write useless words, and then it takes more time for very busy, hard-worked people, to read useless words.

RED LIGHT NO. 2.

I believe, little friends, I would not say, "My pa takes GLEANINGS," or "My pa keeps bees," any more, for the fact of your writing a letter usually implies that he takes it, and keeps bees also. I don't think I would say, "I like honey" any more, either, for so many have said it I am afraid the older ones will begin to laugh when they read our little journal. As a general thing, I don't think I would say, "I go to school," either; for it is to be expected that every boy and girl goes to school nowadays. There, I guess I won't find any more fault now, or else somebody might hold up a red light to me, and say, "Mr. Root, don't talk so much, but let the children talk," and so I think I will. I just want to say, that your letters for the most part are excellent, and I am astonished every month to see how much little folks can do in the way of helping in the great business of the world, of giving as well as receiving knowledge.

FROM ONE TO FOUR, AND 75 LBS. OF HONEY, ETC.

My pa keeps bees. He had one hive in the spring. He has four now. He took about 75 lbs. of honey.

Millie Hoover, age 8.

Huntsville, Pa., Jan. 23, 1883.

DRONES FLYING IN DECEMBER.

Papa has a hive of bees, and the drones were out flying Dec. 2. They are the Holy-Lands.

Gertie Reese, age 12.

Coatesville, Chester Co., Pa., Dec. 20, 1882.

I am 8 years old. I live in the country. Pa has 18 hives of bees. My grandpa has 30 hives of bees. We took lots of honey this last fall. I go to school, and have a fine time. I wash dishes for my ma. This is my first letter. Cecilia Fetrow.

Yocumtown, Pa., Jan. 27, 1883.

FROM 1 TO 91, IN 3 YEARS, AND LOTS OF HONEY.

Grandpa had one Italian; in 3 years he had 91. We took lots of honey this fall. John Fetrow.

Yocumtown, Pa., Jan. 29, 1883.

If your grandpa had just "*one bee*," friend John, he did pretty well, surely.

To-day I am 8 years old. My papa has 24 stands of bees in Simplicity hives. He makes hives on a home-made foot-power saw; also his own sections. He took about 1000 lbs. of honey from Aug. 20 to Sept. 15. We had to feed our bees in June.

Clinton, Mo., Jan. 20, 1883. Mary V. Brown.

We have 26 stands of bees; part of them are Italians. I help papa with his bees, and he gave me one stand. It swarmed last season, and now I have two. I like to work with the bees, but I don't like to get stung, though when I have my bee-hat on I am not afraid of them. Edwin L. Grubb, age 11.

Key, Ohio, Dec. 20, 1882.

FROM 13 TO 40, AND 900 LBS. OF COMB HONEY.

My pa and my brother Albert have got 40 hives of bees, all packed in chaff, and they seem to be all right now. They increased from 13 to 40, and had about 900 lbs. of comb honey. The bees are mostly Italians and a few hybrids.

Katie Unterkircher, age 14.

Manchester, Mich., Jan. 21, 1883.

THE OLDEST ONE OF THE FAMILY.

I am a little girl six years old, and I want a book, so I will write you a letter. Pa keeps bees. He has 22 hives. I help him to fold the boxes. I like honey and bees. I have one hive I call mine. We did not get much honey last year. Pa says catnip is the best honey-plant. I have two brothers and one sister. I am the oldest. Viola Harrold.

Columbiana, Ohio, Jan. 21, 1883.

MINTY'S LETTER.

Pa has 10 hives of bees, and they made a fine lot of honey this summer. I like to see them swarm. I look on when pa or my sisters hive them. Pa uses the Simplicity hive, and he wants to buy some more. I like to see the bees, but I don't like to get hold of the pointed end of them. Mintie S. Bloom, age 8.

Shelby, O., Jan. 22, 1883.

So your sisters hive bees, do they, Mintie? I think your pa must be real glad that he has daughters that can help so much.

Mamma has three hives of bees this winter. She had seven last summer. It has been very cold this winter. We have had three pretty deep snows. I am going to school now; am studying the Scholar's Companion, Rhetoric, Manual of Geography, Familiar Science, Dictionary, and Arithmetic. Don't you think that is pretty well for a boy of 13? Send Silver Keys, when you publish this.

J. Emory Hughes.

Yellow Branch, Va., Feb. 3, 1883.

Pretty good, Emery, especially if the boy got all lessons well.

WHAT MARK SAW AT THE FAIR.

My pa has 49 swarms of bees. They are packed on top with hay, and on the sides with sawdust. They are on the summer stands, except 5 which are in the cellar. They are all alive now. They want to fly badly. Pa took his extractor to the fair this fall, and everybody was looking at it, and wondering whether it was a churn or washing-machine. One old lady said she'd rather have her old churn than that. There was a Given fdn. press, lots of bees and honey, and other fixings at the fair.

Mark T. Hower, age 10.

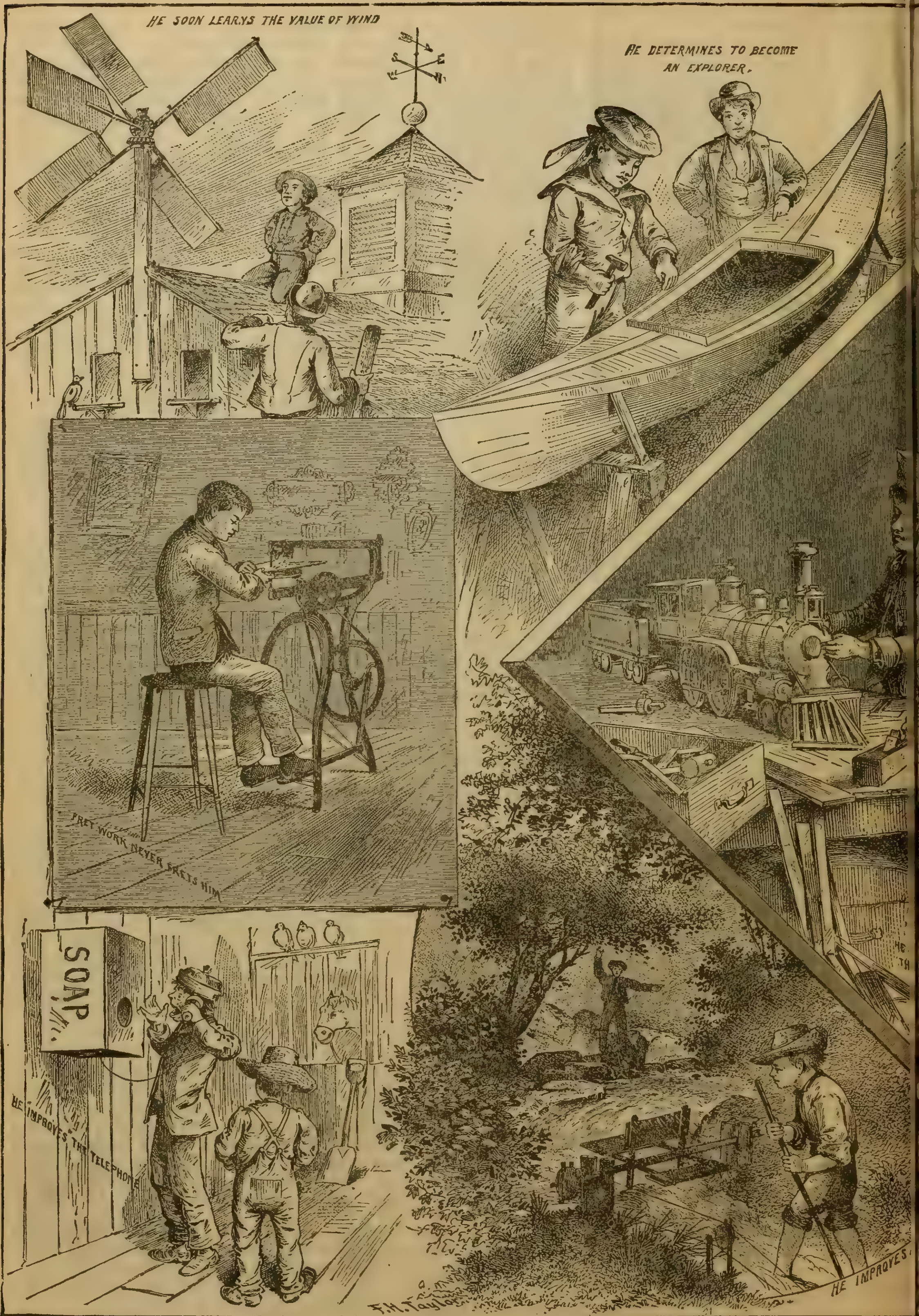
Adrian, Mich., Jan. 22, 1883.

A NUCLEUS ON THE MANTLEPIECE.

We have 57 colonies of bees; 40 of them are mine. You wonder how I got them. Well, I will tell you. My grandpa gave them to me. He gave me one stand. I do not think I was 6 years old then, and now I am 13. Pa has got a nucleus in the house on the mantleboard. He found it on a tree last autumn. He does not think they were any of ours, for they were black, and ours are Italians. He lets them fly in the house sometimes, and then, oh for the window-blinds! Where in the Bible can the word butter be found? The place where it says not to offer honey as an offering, can be found in Lev. 2 : 11.

Lillie A. Gandy.

Churubusco, Ind., Jan. 20, 1883.


HE SOON LEARNS THE VALUE OF WIND
HE DETERMINES TO BECOME AN EXPLORER.
FRET WORK NEVER FRETS HIM
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SOAP
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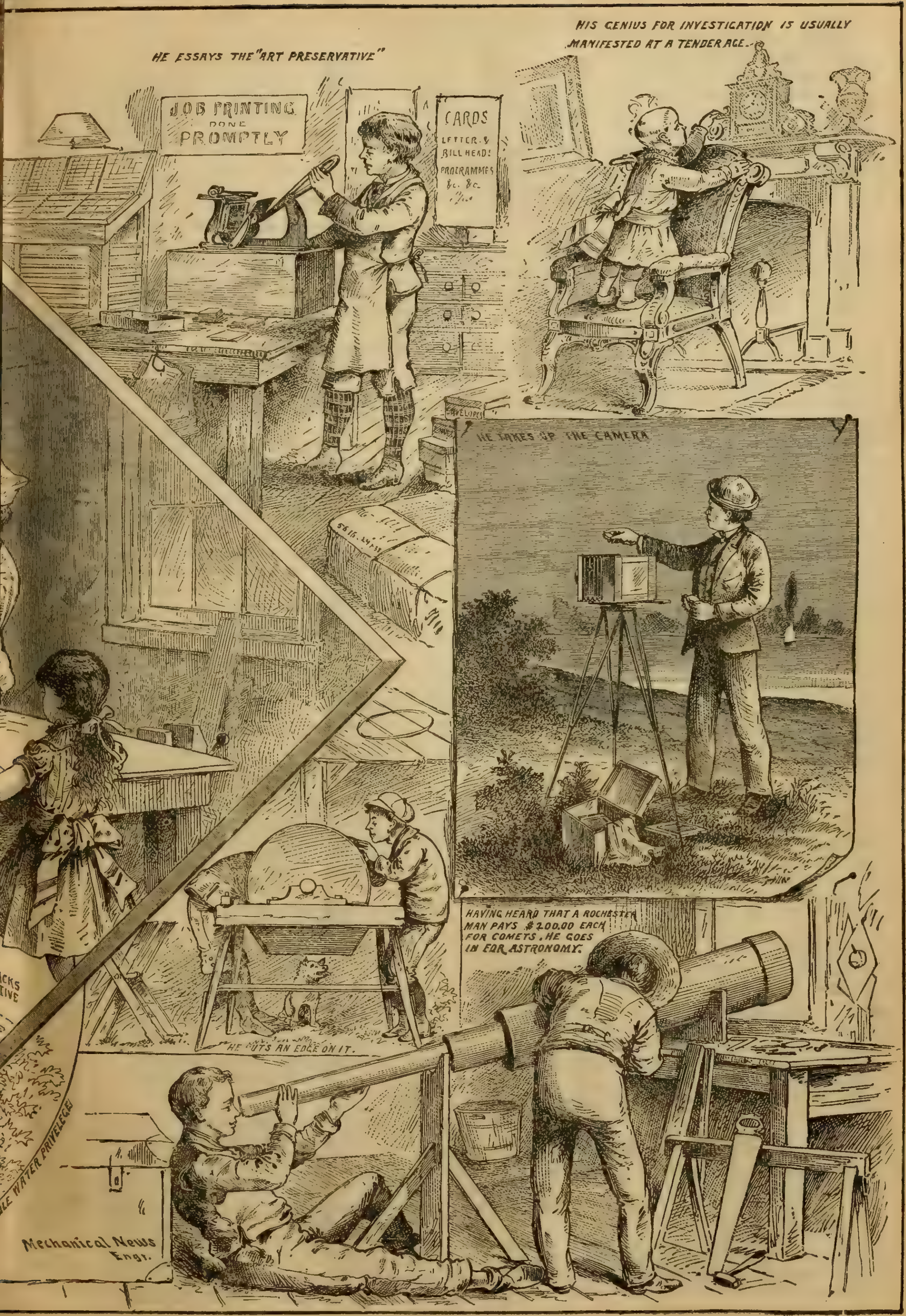
HE IMPROVES.
F. H. Taylor

CAN BOY.


HE ESSAYS THE "ART PRESERVATIVE"
JOB PRINTING DONE PROMPTLY
CARDS LETTER & BILL HEADS PROGRAMMES &c. &c.
HIS GENIUS FOR INVESTIGATION IS USUALLY MANIFESTED AT A TENDER AGE.
ENVELOPES
HE TAKES UP THE CAMERA
HAVING HEARD THAT A ROCHESTER MAN PAYS $200.00 EACH FOR COMETS, HE GOES IN FOR ASTRONOMY.
HE PUTS AN EDGE ON IT.
ICKS
TIVE
LE WATER PRIVELEGE!
Mechanical News Engr.

FROM A TENNESSEE JUVENILE.

My pa has 34 hives of bees. Some of them have young bees just hatching out. Yesterday all the bees in one hive, that had some sealed honey in it, swarmed out. Pa caught the queen and put them back. He is making some Langstroth hives. I help make the frames. BURTON WORLEY, age 9.

Isom's Store, Maury Co., Tenn., Jan. 28, 1883.

LAURA'S LETTER.

I thought I would write you a letter. Pa got ma a stand of bees, and I am a going to watch and help her hive them when they swarm. Ma is going to let me have a swarm and a hen, and some turkey eggs. This is my first letter. Please send me a book.

LAURA MOTE, age 9.

Six Mile, Jennings Co., Ind., Jan. 23, 1883.

My pa is a farmer, and keeps a few bees. He has 40 colonies. Last spring, No. 11 swarmed; 8 days after, pa looked at them to see if they were going to swarm again, and found them busy as *bees*, killing drones; and so he went to the timber. But they swarmed and in a short time I hived them.

IONE C. SPERRY, age 13.

Nokomis, Ill., Jan. 29, 1883.

I have 3 swarms of bees. I took 33 dollars from them, so you see old Pa. is not behind yet. Ma has 31 good ones; took lots of honey. Pa is making board rules, and taking care of his little trout. We have 16,000 fish in our ponds. This is my first letter. I have never been to school.

GUSTA ELLENBERGER, age 7.

Laddsburg, Pa., Jan. 22, 1883.

SOME OF THE REASONS WHY FARMERS SHOULD KEEP BEES, IN PREFERENCE TO OTHER STOCK.

Papa keeps some bees in the summer, and some steers in the winter. I believe I would rather keep bees than steers, because bees can only sting, and steers can both horn and kick.

WILLIAM D. BOSSERMAN.

Gettysburg, Pa., Jan. 29, 1883.

FROM 3 TO 7, AND 160 LBS. OF HONEY.

My pa keeps bees. He had three colonies of bees to begin with in the spring. He had one natural swarm, and increased to seven by dividing. We got 160 lbs. of surplus honey. If this is worth a book, please send me Ten Nights in a Bar-Room.

WILLIAM J. GREEN, age 9.

Detroit, Mich., Jan. 22, 1883.

I guess it is worth a book, William, for it is a very good report from a small apiary.

THE BOY THAT IS GOING TO BE A BEE-KEEPER, STORE-KEEPER, AND SCHOOL-TEACHER.

Ma says that I may write to you. I have no brother to play with, so I read to my ma. I have only one sister, and her husband is a bee-keeper. He has nearly 200 colonies. Perhaps I shall begin to take care of bees some time. I go to Sunday-school, and to day school when there is any. There has been vacation for two weeks. School begins to-morrow. I am studying to be a school-teacher. I think I should like to be a store-keeper.

CLARENCE W. SQUIER.

Coopersville, Mich., Jan. 7, 1883.

Hadn't you better come and live with me, Clarence? I am bee-keeper and store-keeper now, and I used to be a school-teacher once.

HUGH AND HIS PUP.

My grandpa would like to have me and my brother take a hive of bees on shares. Probably I will if they live till spring. My grandpa has bees, and I go to see them sometimes. I have a young pup, and have lots of fun with him. Sometimes I go hunting, though game is scarce in this section.

HUGH A. ALVIS.

Montrose, Lee Co., Iowa, Feb., 1883.

We want your paper, and should have sent for it the first of the year; but we expected to see you at the State Bee-Keepers' Association at Indianapolis, but failed. Pa and I went there, and had a good time. We shall want more hives and fdn. in the spring, if the hard winter doesn't kill our bees.

C. P. HOCKETT.

Jonesboro, Grant Co., Ind., Jan. 24, 1883.

Well, I declare! I should have felt sorry had I known any of the juveniles were there looking for me.

A COUPLE OF FLORIDA JUVENILES.

My papa keeps 50 swarms of bees. We would have more honey; but in February and March, people burn the woods off and burn all the other flowers up. Our bees have not swarmed this year.

ELBERT A. FROSCHER, age 9.

La Grange, Fla., Jan. 27, 1883.

Elbert wrote to you, and mamma said I can too. I have two little rabbits. I love to see mamma and papa extract honey. They extracted 80 gallons in one day. Ma holds my hand and lets me write. Elbert wants a book. I want Silver Keys, if you think I ought to have one. I am 5 years old.

CARRIE BELL FROSCHER.

Titusville, Fla., Jan. 17, 1883.

Very good indeed, Carrie Bell, for a five-year-old bee-girl. Who would have thought friend Froscher had a boy and girl, who could write letters?

FROM A LITTLE GIRL WHO HAS NEVER BEEN TO SCHOOL.

Mr. Rackwood has 20 stands of bees. We live with him, and he sends to you for a good many things. I have one sister, and her eyes are as black as charcoal; and I have three brothers too. I have not been to school a day in my life.

EVA GLAWSON, age 10.

New Smyrna, Fla., Jan. 25, 1883.

Papa put away 94 stands of bees in the bee cellar. I go to school most of the time. I missed only 3 days on account of deep snow and bad weather. I help mamma; I can wash dishes, sweep floors, and do lots of other things. My papa has gone to Eureka Springs, Arkansas, for his health. This is the fourth day that the thermometer has stayed below zero all day. This morning it was 30° below zero.

OLLA E. BARGAR, age 9 years.

Border Plains, Webster Co., Iowa, Jan. 22, 1883.

A SWARM OF BEES FOR WRITING A LETTER — WHEW!

I have been reading the children's letters in the JUVENILE. I have decided to write one. I am 11 years old, but this is my first letter. My pa keeps bees. He has 93 colonies in Langstroth hives. He has promised to give me one for writing this letter. He is going to start out next week to sell some bees. He is going to sell some A B C books if he can. I am going to school now to my ma. There is no Sunday-school near us this winter.

Pinson, Tenn., Jan. 31, 1883. SHEPPY SIMMONS.

A BRIEF REPORT.

Pa did not have very good luck last summer. We have got two hives of bees. We have received no honey from them this season.

Lewie Ketcham, age 9.

Port Crane, N. Y., Jan. 28, 1883.

I have 2 hives of my own. Pa has kept bees for a long time in box hives, but we don't get much honey. We are going to transfer in the spring to Simplicity hives. We are going to get them from Mr. Flanagan, so as to avoid freight. I like to read GLEANINGS. Pa doesn't take it, but I borrow it from one of our neighbors. Lizzie and I don't have very far to go to school. Lizzie is my little sister. We don't learn bee-keeping at our school.

Joseph Schroeder, age 12.

Freeburg, St. Clair Co., Ill., Feb. 2, 1883.

BLASTED HOPES.

My mamma went to visit grandma in Keithsburg, Illinois, last summer. She gave us a stand of Italian bees. They were expressed here in August; but the dry weather had burnt up every thing, so the poor bees could not get any honey. We fed them for a good while, then the poor things died. We all felt bad about losing them. I hope mamma will soon get some more. **Mollie Tester**, age 11.

Salt Creek, Kan., Jan. 30, 1883.

But you ought to have fed them a good deal more, friend Mollie, so they couldn't starve.

CATNIP SEED.

Pa has four stands of bees. We had all the comb honey we wanted to use and some to sell. Do you buy any catnip seed, and how much do you pay for it? **Mary Perry.**

We have all the catnip seed we shall need for some time, Mary, but we want some horsemint seed.

Pa has 4 stands of bees. They made a lot of honey, and would have made more, but for the dry season. Pa takes GLEANINGS, and I love to read the JUVENILE. I wish we could hear more of Merrybanks. I should like Rescued from Egypt for pa's renewal. If you think this worth printing, please send me "Ten Nights in a Bar-Room." **Charley Perry.**

Southbury, Conn., Feb. 5, 1883.

FANNIE GREEN AND HER LITTLE SISTER.

Some of my schoolmates have written and got quite nice books. My name is Fanny Green. We do not keep bees now, for they all died two years ago, and we have not had any since. My little sister is going to put her letter in with mine. Mother says I had better put five cents in my letter, and that will pay for a book for some little girl who can not buy one. **Fannie A. Green.**

Clarence, Erie Co., N. Y., Jan., 1883.

THE LITTLE SISTER'S LETTER, PUT IN AS SHE PRINTED IT.

I am seven years old. I can not write, but I can read, and I want a book. I would like Bennie's White Chicken. **Mamie Green.**

Clarence, Erie Co., N. Y. Jan. 11, 1883.

Your letter is very good, Mamie, and I read it all real easy, which is more than I can say of some of the big folks' letters.

THE "YELLOW" QUEEN-CELL, AND WHAT CAME OF IT.

My pa has 28 stands of bees, and I believe he thinks more of bees than any thing you can give to him. He gave me a stand of bees last spring, and I gave it a nice yellow queen-cell. It hatched out, and my pa looked at it and saw a nice yellow queen, and in about a week afterward I looked for it, but could not find it; so I gave it another black queen already hatched out, and I fed it with sugar boiled with water, and in a few weeks it swarmed out. We put it back in the hive, and in the evening when I was not at home it swarmed out and went away. Now, my pa says he will give me another one in the spring. So all my work was for nothing.

Homer A. Rau, age 11.

Columbiana, O., Jan. 22, 1883.

Not altogether for nothing, was it, Homer? Didn't you learn something about bees, by that experience?

THE FINCH CHILDREN.

REMINISCENCES ON BEES.

My father used to keep bees, but is not able now. I can remember of standing on top of the hives to pick apple-blooms from the trees that stood just behind the hives. I don't think I ever got stung from it. **Anna E. Finch**, age 14.

My old hen stole her nest in the woods. She hatched 12 chickens, about the first of October. A stone fell on two and killed them; 5 died. I sold my hen for 20 cents. I have 5 chickens left. I bring in almost all the wood we burn, and snow for ma to melt to wash with. **Willie C. Finch**, age 6.

Well done fore a 6-year-old chick, Willie.

BEES IN SYRIA, BY A JUVENILE.

One day last summer we had visitors who live 6000 miles from here — ma's cousin and her husband and little girl. He is a missionary in Syria, Asia. He was at Beyrout when Frank Benton landed there. The little girl's name is Mizpeh. The Arabs call water *moi*. They keep their bees in earthen jars fastened in stone walls; and when they want honey they take the jar out and break it. There are 120 sheets in a quarter of a ream. How much is the postage on it? Bible question: Who washed his steps with butter? **Ada J. Finch**, age 12.

West Township, Albany Co., N. Y., Feb. 6, 1883.

Well done, Ada. The postage on the 15-cent note paper is 13c. It is best to have it go with other goods when practicable.

HOW RUSH "DIDN'T" GET THE BEES DOWN OUT OF THAT ELM-TREE.

This is my first letter. I have one swarm of bees. I had two. I gave my sister one for watching bees. Father has 73 swarms. Last summer father went to town, and while he was gone a swarm of bees came out and alighted on a big elm. Mother and myself got the swarming-box, and tried to get them down; but, down they did not come; so I got a big ladder and set it up against the tree, and I went up with the swarming-box and brush to get them down. But, no, sir; that did not work. They stung right and left. I saw I could not do any thing with them. I was determined they should not go off, so I got some water and gave them a cold bath, and kept it up till father came home, and he had some trouble to get them down, they were so cross; but they made lots of honey. Now if this is worth a book, please send Ten Nights in a Bar-Room.

Rush Holmes.

Sauk Rapids, Benton Co., Minn., Jan. 30, 1883.

Of course it is worth a book, Rush, and you did as well as any boy could well have done under the circumstances.

HAD TO BE FED IN JUNE, AND GAVE "ONLY" 320 LBS. OF HONEY.

Pa had to fed his swarms of bees in June—something never heard of here before. They gave him only two new swarms; 8 swarms gave us 320 lbs. of comb honey. Pa puts his bee-hives for winter in boxes with four inches of chaff all around them; he never lost a swarm in wintering.

GRACIE M. HORTON, age 10.

Smithboro, Tioga Co., N. Y., Dec. 11, 1882.

FROM 3 TO 6, AND 120 LBS. OF HONEY.

Pa has 3 stands of bees. In the spring he increased to 6, and got 120 lbs. of honey. He has them on their summer stands, under a shed. They are all right yet. I have a little brother, four years old. He watches the bees in swarming time. Pa gives him five cents for every swarm that comes out. This is my first letter, and if I deserve a book, please send me Ten Nights in a Bar-Room.

CASE VANDERBELT, age 11.

Riegelsville, N. J., Jan. 22, 1883.

FROM 11 TO 20, AND 3½ BARRELS OF HONEY, AWAY DOWN IN FLORIDA.

We had 11 swarms in the spring, and increased to 20. We got over 3½ barrels of honey. Our bees are Italians and hybrids and blacks. We get lots of oysters and fish. My sister Eva is going to write a letter too. If my letter is worth a book, please send me Pilgrim's Progress. GEORGE F. GLAWSON.

New Smyrna, Volusia Co., Fla., Jan. 26, 1883.

To be sure, it is, George. But wouldn't I like to come and see you, and look at the bees, and get some fish and oysters!

My pa has about 15 stands, and they seem to be wintering well up to this date. He packed them in sawdust for the winter. He did not get very much surplus honey, on account of poor season and dividing up for increase. My pa bought an extractor and honey-knife, and some very nice foundation from you, and thanks for your promptness in sending the same. On the 27th day of this month the thermometer went from 10° above zero to 46° below, in 10 hours, which is very uncommon for this country.

FLORENCE E. COOMBS.

Memphis, Clark Co., Ind., Jan. 30, 1883.

From several letters in this number it will be seen that from Jan. 20 to 30 the weather was the coldest recorded. This will go far to test the relative merits of cellar and outdoor wintering.

WHAT JAMES DID WHEN HE WAS TWO YEARS OLD.

My papa has 20 stands of bees. When I was two years old I went to my papa's bee-stand and pulled off a board in front of it, and the bees flew into my face, and about 75 stung me. My mamma pulled the stings out, while my papa ran to the drug-store to get ammonia and the doctor. My papa thought I would not live; but I got over it, and am now 10 years old. My papa made about 3 or 4 hundred weight of honey last year. He has Italian and hybrid bees, and black ones too. He made no white honey at all; none was made in the whole country about here. My papa got all his bees in Langstroth hives. JAMES PETERSON.

Salem, N. C., Feb. 8, 1883.

STRAWBERRIES, CHICKENS, EGGS, ETC.

My name is Anna. My parents are dead. I have three brothers and four sisters. I live at my uncle's. He raises fruit and vegetables; and our neighbor, Mr. Klarr, has lots of bees and lots of honey. I don't like honey, but I like strawberries and cream with a big lump of sugar in them. I am going to school. We raise rye; have chickens and lots of fresh eggs; we live two miles from town.

ANNA MOORE, age 9.

Pana, Christian Co., Ill., Feb., 1883.

THE SWARM THAT WAS UNDER THE HIVE.

My father has been a bee-keeper about 8 years, and has 39 swarms. Last summer he bought an Italian queen, and we were going to divide a swarm, and I happened to look under the bottom-board, and saw a swarm that had begun to make comb under there. Father put those that were under the stand in a hive, and gave the queen to the old swarm, and they did well. Father says I may have a swarm of my own next summer, and then I will commence business of my own. C. M. INMAN.

Romeo, Mich., Dec. 7, 1882.

THE WELTY CHILDREN.

Pa has 39 stands of bees. He bought some of his hives of Scovell & Anderson, and some he made himself. We got about 1500 lbs. of extracted, and 1500 of comb honey. Pa uses the one and two pound section boxes, and the Novice extractor. I am 9 years old. I have never gone to school much, and never wrote at school. CHARLEY WELTY.

Last summer I made section boxes for pa, and fastened comb in them. Pa is building a new house. I am 12 years old. This is my first letter. If I see this in print, perhaps I will write and let you know how pa gets along moving his bees. We are going to move about 6 miles from where we are now living. MARY WELTY.

Medoc, Mo., Feb. 1, 1883.

Tell us how he got along, by all means, Mary. We want to know all about moving bees.

A LITTLE LETTER FROM MINNESOTA.

My pa has kept bees three or four years. We have 20 stands in our cellar now. I go to Sunday-school and day school. I am in the Fourth Reader. I have three sisters and two brothers. I like bees, but they don't like me. Ma has to hive them sometimes when pa is not at home. CARRIE LINK.

FROM 9 TO 20, AND 300 LBS. OF HONEY.

My pa had 12 swarms of bees last spring. Three got robbed, so we had nine yet, and increased to 22 and sold 2, and have 20 in the cellar now, all in Langstroth hives. We got 300 lbs. of honey, all in 6-inch square boxes. We have a cellar just on purpose for bees. We keep it at 38°. Minnesota is not a very good country for bees to make honey. We weighed all of our hives before we carried them into the cellar, and they averaged about 90 lbs. apiece, so they have enough to live through winter. If I deserve a book, please send me Ten Nights in a Bar-Room.

JOSEPH LINK, age 14.

Preston, Fillmore Co., Minn., Feb. 2, 1883.

A WARNING ABOUT WALKING CAREFULLY ON THE ICE.

My pa has 32 colonies of bees, all snugly packed in chaff. Last week a little boy ten years old in our school fell on the ice and killed himself. Little boys and girls should stay off the ice. I will send a card to Blue Eyes. I have blue eyes too. My pa's name is S. S. Pontious. ALWILDA PONTIOUS.

Akron, Fulton Co., Ind., Jan. 22, 1883.

The card is a very pretty one, Alwilda. Your warning is a good one for us all. I fell down flat the other day, because I walked heedlessly on the ice. I hurt my elbow, and had to walk all bent up for awhile. I walk real careful now, you may be sure.

JOSEPH AND HIS BEE-TREE.

Please send me a sample copy of GLEANINGS and price list. I found a bee-tree, August 8, 1882. I got one of the neighbors and pa to go with me. It was an elm-tree about 3 feet across. When it fell we could see them going in and out of a hole about 6 in. across. I got them home and put them in a hive. I have but one stand of bees. A man who lives about 2 miles from here found 3 more swarms on the same forty acres. That was doing pretty well, was it not?

JOSEPH H. OSBORNE, age 12.

Hopkins, Mo., Jan. 20, 1883.

Tiptop, Joseph, for a boy only 12 years old. Some of our older ones may take courage, when they hear what a boy can do.

Pa had 15 colonies of bees last spring, but five of them were so weak that they built up to make good swarms, only by the time the honey-flow ceased. He got 1500 lbs. of extracted honey, and increased to 30 by natural swarming.

HOW PA CLEANS HIS PAINT-BRUSHES.

When he gets done using them he puts some kerosene in a tin cup, and churns the brush up and down in it, and it cleans it as nicely as it was before it was ever used. Did you ever try it? Pa saw that I was so much interested in the JUVENILE, he gave it to me, and it pleased me very much. This is my first letter; and if you think I deserve a book, please send me Ten Nights in a Bar-Room.

JAKIE HUFFMAN, age 12.

Very good indeed, friend Jakie. I have never tried that way of cleaning paint-brushes, but I think the plan may be valuable.

FROM 15 TO 30, AND 1500 LBS. OF HONEY.

Pa has 30 stands of bees now, from 15 last spring, and extracted 1500 lbs. of honey, besides some comb honey. He keeps his bees in the cellar, out of the cold. It was 30° below zero yesterday. This is my first letter. LIZZIE HUFFMAN.

Monroe, Green Co., Wis., Jan. 23, 1883.

A VISIT TO D. A. JONES.

Pa and ma were in Beeton, and had the pleasure of conversing with D. A. Jones. Well, that nice plant which you call blue thistle, he calls blue vipers. We have a lot of it growing on the road here, and the people in this vicinity do not know what to call it, so we will call it blue vipers. It is our best honey-plant. The answer to Hannah M. Smith's question is Leviticus 2 : 11; the answer to G. F. Greely, Proverbs 24 : 13. The answer to yours is Luke 24:42. Brother thanks you for that nice book you sent him. If I deserve a book, please send me Silver Keys.

SARAH J. SWITZER, age 11.

Fergus, Ont., Can., Jan. 22, 1883.

Don't you mean "Viper's Bugloss," Sarah? That is the common name for blue thistle, as given in the botany. Perhaps "Blue Vipers" has been corrupted from it.

RASPBERRIES AS HONEY-PLANTS.

Pa commenced the winter with 60 swarms of bees. They are all packed in chaff. He likes bee-keeping very much. We all help him as much as we can. He makes his own hives, and buys his sections in the flat. There are no boys in our family, so it keeps us girls pretty busy in the spring. I have one sister older and one younger than myself. My age is eleven. We raise strawberries, and a few raspberries. Pa wishes he had acres and acres of them, for they are just alive with bees when they are in bloom. They are mostly red. I have got four prizes for being at the head the most in school; one for good conduct. Please give my love to Blue Eyes. I have blue eyes too. MARY E. BARRETT.

Cherry Valley, O., Jan. 22, 1882.

SOME WISE COUNSELS FROM A YOUNG HEAD.

Papa thinks his bees are wintering nicely. They had a nice fly a few days ago, and no signs of dysentery. They are on summer stands, and in single-walled hives. I am next to the grammar room in school. We have a large playground in the front. We have some flower-beds. Mr. Green, the principal, is talking about fixing the front of the school-house up. He sent off for some flower-seeds. He has 12 kinds of seeds. You would not think of planting flower-seeds in winter; but if a farmer expects flowers in the summer, and sits around the fire all winter, I don't think he will have many.

D. BELLE LEWEDAG.

Wheeling, W. Va., Jan. 29, 1883.

FROM 15 TO 30, AND $50.00 WORTH OF HONEY — AND SOME BAD LUCK BESIDES.

Pa has 30 swarms — 12 in chaff, and 18 in the cellar. Pa sold $50.00 worth of honey this year, besides what we ate. He increased from 15 to 30 swarms. One day last summer, two hives swarmed at the same time, and alighted on the same limb. He held the swarming-box, and I climbed up the tree and shook the limb, and the queens went into it. He thought their wings were clipped. They were not, and they came pretty near flying away. Last summer pa and ma went to my uncle's, and six swarms got robbed. One day last summer pa and I went out, and the working bees were killing drones.

THOMAS E. STOCKS.

Nashua, Chickasaw Co., Iowa, Jan., 1883.

BE CAREFUL ABOUT SMOTHERING THE BEES; A LITTLE GIRL'S WARNING.

Papa has 11 stands of bees, and he lost two. They were big swarms, and papa found one of them. But it went away, and he did not find them, and the other swarm he did not get at all. He said he would give me a quarter every time I saw them swarm, and the same day I saw a swarm, so I got a quarter; but I did not see any more. While papa was transferring bees he had bad luck. They must have been just ready to swarm, for there were so many, and the box he smoked them into must have been too close; for when he went to put them in the new hive they were all dead; nearly a peck of them, I should think. This is my first letter.

MAY KELLER, age 8.

Mt. Vernon, Ill., Jan. 22, 1883.

HOW EDGAR'S FATHER FETCHED BACK A RUNAWAY.

We put 30 colonies of bees in the house this winter. One has died. We left eight out of doors on the summer stands, and packed them with straw. I read a great deal in GLEANINGS about other boys' and girls' bees running off. Our bees fly off. There was a swarm which came out and started off, and we followed them, and they settled on a tree. Father went to the house and got a frame and tied it to a stick and held it up in the swarm of bees, and they alighted on it. Then he took it and put it in the hive. I have one colony of bees. My father likes his watch very much that you sent him. I help him with the bees. I often get stung. Father thinks that queen you sent him is a nice one.

EDGAR KENNEDY, age 12.

Mont Clair, Ind., Jan. 24, 1883.

Very good, Edgar, and *very nicely written.*

FRIEND WILTSE'S BEES, REPORTED BY ALBERT.

After uniting our bees in the fall we had 113 stands. Those in the large hives gather most honey. We now have the bees that are in large hives on the south side of a tight board fence. We put two thicknesses of cloth over the frames, leaving an opening over the center of the brood-nest for the moisture to pass through, and put cobs over the opening for it to condense on in cold weather. They fly out when the weather is about freezing cold in the shade. The sun so warms the hives that they fly out, and some of them fall on the snow and die. Those in the small hives we put in cellar, and shut in tight, Dec. 20. They are uneasy most of the time, and some of them get out and die on the cellar floor. All appear to be healthy. We have had some very cold weather. The thermometer indicated 20° below zero.

ALBERT WILTSE.

Falls City, Neb., Jan. 29, 1883.

WILLIE AND HIS PRINTING-PRESS.

I wrote a letter for the JUVENILE a month or two ago, about our bees, etc. Some of them are nearly covered with snow. It is pretty deep around here this winter, and also very cold. It has been 34° below zero here. I received one of your six-dollar printing-presses, a few months ago, and print cards. I have printed a good many now for friends and acquaintances. I send you one of my cards, which I printed on my press. I like to work with a press very much, and only wish I had a larger one.

WILLIE A. YOUNG, age 13.

La Salle, Ill., Jan. 23, 1883.

Why, Willie, I hardly thought it possible such a beautiful card could be printed by a boy 13 years old; and, to tell the truth, I was myself a little disappointed in those $6.00 presses. I am very glad indeed you do so well with yours.

LINA AND HER POETRY.

My pa has 28 stands. I am taking music lessons. My mamma has children's meeting every Saturday at our house. There were two girls converted. I should like to have a book. Please send me "Ten Nights in a Bar-Room." I have two brothers, Willie and Johnnie. I had a sister, Euphima, but she died when she was three months old. I have been composing some poetry.

Winter has come, and it is cold,
And our honey all is sold;
Bees are snugly tucked away,
Waiting for the bright spring day.

LINA LANGTON.

Windham, Portage Co., O., Jan. 10, 1883.

One line about winter, two about bees, and one about spring. It seems to me, Lina, there is an "awful lot" of bees "waiting for the bright spring day."

MARY'S WHITE HIVE, ETC.

My pa has been a bee-keeper a good many years. He winters about 40 swarms every year, as that is as many as he finds profitable with his farming. We have 30 swarms outdoors in good chaff hives, and 10 in the cellar in single hives. Pa thinks the cellar is the best place for wintering, taking the winters as they come. I have one swarm of bees. My hive is painted white, and is in the cellar. Pa got a Holy-Land queen from D. A. Jones last summer, that he paid $6.00 for, and he reared 17 young queens from her. Yesterday was a fine day, and some of our bees flew a good deal. Am I entitled to a book?

MARY MICHENER.

Low Banks, Ont., Can., Jan. 31, 1883.

To be sure, you are, Mary, and it does me lots of good to get a letter from a little girl belonging to my old friend Ila Michener.

FRED AND HIS MOTHER.

Mina is my adopted sister. She has lost both father and mother. She can go right among the bees. They don't often sting her. My mother and I are going to manage the apiary this year. Mr. Barlow and Dr. Baker have been our bee-keepers till now. Our bees are all right so far. My pa has kept as many as 165 stands. He used to take GLEANINGS, and thought it was the best paper on bees ever published.

FRED WIRT, age 13.

I was so pleased to read my last letter in the JUVENILE! I will write about bees in the spring. I must tell you that I learned a nice piece about two good children, and spoke it at some friends' on New Year's day. If you would like it for the little girls and boys, I will send it to you. I also sung a song about "Jesus' Little Lamb."

MINA WIRT, age 8.

Keithsburg, Ill., Jan., 1883.

Send the piece to us, by all means, Mina. Jesus wants all the little girls for his lambs, who have lost their father and mother.

WATERING BEES IN WINTER; FREDDIE'S ACCOUNT OF IT.

I THOUGHT I WOULD WRITE YOU A LETTER. I HAVE A BROTHER CHARLIE, SIX YEARS OLD. WE WHEEL PAPA'S WOOD IN THE WOOD-HOUSE, ON A WHEELBARROW. MY PAPA HAS 106 SWARMS OF BEES. PAPA GOT A BLACK MAN AND A WHITE ONE TO CARRY THEM INTO THE CELLAR. I GO DOWN TO SEE THEM SOMETIMES. PAPA POURS WATER ON THE CELLAR BOTTOM. HE SAYS THE BEES LIKE THE MOIST AIR. THE BEES STAND AROUND A PUDDLE OF WATER, AND DRINK WHEN PAPA GIVES THEM SOME. I HOPE YOU WILL LIKE MY LETTER, AND WILL PRINT IT, AS IT IS MY FIRST ONE. CHARLIE AND I GO TO SCHOOL, AND TO SABBATH-SCHOOL.

FRED G. MASON, AGE 8.

FABIUS, ONONDAGA CO., N. Y., FEB. 1, 1883.

I like the letter first rate, Freddie, and I should like ever so much to see the bees drink out of that puddle. Tell us if they winter all right, won't you?

BERTHA TELLS US ABOUT HER PA'S BEE-KEEPING.

My pa keeps bees. He began four years ago, with two swarms of blacks, which he bought in old "box" hives. He put them into some patent hives which he made, and in two years he had but four swarms, and no honey. He knew nothing about the improved way of handling them until he got one of your A B C books, and ma said that he could not make a hive from your description; but he did, and they looked nice too. He sent to you for frames and sections in the flat, and I helped him to put them together. A good many around here came to see how to make them. He did not get much honey the following year; but last year they did better. He got 150 lbs. of surplus honey, and has eight swarms in the cellar, doing well. He sent and got an Italian queen and a pound of bees last summer, and his bees are half hybrids or Italians. The poor little blacks are getting crowded out, just as we white people have crowded out the poor Indians. Pa is very fond of bees. He is in hopes to have better luck next time. He thinks a great deal of GLEANINGS, and reads it out loud to us. This will be a surprise to pa.

BERTHA E. NELSON, age 12.

West Stockholm, St. Law. Co., N. Y., Jan. 20, 1883.

DRONES FROM WORKER EGGS; BY A 14-YEAR OLD JUVENILE.

Will you allow a little girl fourteen years old, who has done much work about the apiary, to speak of what has come under her own observation relative to the workers changing the sex of the egg? For five or more years my father and I have raised many queens for our own use and that of our neighbors. Last year we bought about 15 hives of black bees, with the object of seeing how many Cyprian hives we could make from them; and in order to do it we proceeded in the following manner: The black queen and unsealed brood were previously removed, and in their place we put fdn. Then Cyprian worker eggs, about one day old, were placed in the center of about one-half bushel of bees. Now listen to the result: In almost every case, where no Italian drones or drone brood was placed, and after the queens and workers were hatched out, there were Cyprian drones to hatch; and in order to satisfy myself that no mistake was made, I pulled them from the cells and examined. Say to Mrs. Harrison that I can do more hard work in the apiary than lazy men. If I am entitled to a book, please send Ten Nights in a Bar-Room.

ISABELLA WIER.

South River, A. A. Co., Md., Jan. 31, 1883.

We are very glad of your testimony, friend Isabella, and I am very glad indeed to know that you are not only reading, but working understandingly. Go on, and let us hear from you more.

The following I copy from the *Christian Advocate* of Jan. 4, 1883:—

> Tobacco is an evil weed,
> And from the devil did proceed;
> It spoils your breath and soils your clothes,
> And makes a chimney of your nose.

Would you give me a book, if you think I deserve it? I try to be a good little girl. Send me Pilgrim's Progress.

JESSIE S. WIER, age 8.

South River, Md., Feb. 1, 1883.

May God bless you, my staunch little friend Jessie, for your little verse. If you don't deserve Pilgrim's Progress, I don't know who does.

A LETTER FROM IOWA, WITH A GREAT DEAL OF NEWS IN IT.

My father has 19 swarms of bees. They made over 1000 lbs. last summer. My brother has two of them. One made 176 lbs. They would have done much better if the spring had not been so hard on them. We extracted considerable in the busiest time of the honey harvest. It kept us busy to keep them busy. We thought it best, seeing they were so weakened by the cold wet spring. When they swarmed we would go to the hive and cut out the queen-cells and put the new swarm right back where it came from. We thought we would have stronger colonies and more honey by doing that way. Don't you think so? Mother thinks honey is just as good as sugar for sweetening a great many things, and even for sweetening tea and coffee. The bees are all in the cellar now, and they seem quite happy. The thermometer has been 24° below zero twice. I rather think they enjoy 40 above rather than 24 below, out in the snow. There was an owl frozen in our school coalhouse, and two little quails under the schoolhouse. The teacher took the wings to put on her hat. There was a freight train wrecked by a broken rail half a mile south of our house; eight cars were thrown from the track, and badly broken up, and corn and wheat thrown out among the snow, but no one hurt.

A. MAY PROVAN, age 11.

Traer, Tama Co., Ia., Jan. 25, 1883.

KIND WORDS FROM OUR CUSTOMERS.

The Story of the Bible came to hand all right, and the children are well pleased with it.

Barbour's Mills, Pa., Jan. 5, 1883. ANN SCAIFE.

The hives have come to hand. I think they are about right. That is the way my mind runs at present.

W. W. TURNER.

Oak Hill, N. Y., Jan. 29, 1883.

OUR JOB PRINTING.

The circulars and envelopes just came to hand, and I must say they were very nicely done.

Linden, Mich., Jan. 24, 1883. L. E. WELCH.

"Waterbury" received, and GLEANINGS started for a year, according to your offer for $4.00. Thanks; the watch is worth the money alone. It seems to be as good a time-keeper as the best.

H. KINGSBURY.

Lockport, Niagara Co., N. Y., Feb. 3, 1883.

This March journal has got so dirty that I am ashamed to send it. I have two small children who have to read my journals after I do.

NELSON HUBBARD.

South Strafford, Vermont, Jan., 1883.

[Never mind the dirt, friend H., if you can only get the children to reading them.]

I can say, that I have always had better satisfaction in getting goods from you than from any other place. Those 244-lb. scales I purchased of you are reliable, and will stand the test by the side of high-priced scales here in the stores. They were going to charge me $5.00 at the hardware store here for second-hand scales weighing only 10 lbs., but I could not see the point, when new ones weighing 244 lbs. cost me here only $5.35.

GEO. P. HOWARDS.

Marion, Wayne Co., N. Y., Jan. 20, 1883.

STORY OF THE BIBLE.

I am well pleased with "Story of the Bible." I would much rather place it in the hands of a child than any of the books filled with made-up stories. It makes a first-rate Christmas present for any child who can read in one syllable.

CYMS GOSS.

Bellmore, Ind., Dec. 25, 1882.

[I believe your opinion is the general one, friend G. We have had a very large trade on the book, and one customer sent right back for another just as soon as he saw what a very large nice book it was for so small a sum of money.]

I shall try to do without GLEANINGS this year, and we will be good friends still; of course, we will; if not, why not?

C. W. LEAH.

Spanish Fork, Utah, Jan. 23, 1883.

[I really hope that nothing will happen to prevent our being good friends still, friend L.; but I am going to try to have so much that is good in GLEANINGS, that you will hear your neighbors tell about it, until you can't stand it without it; and then I hope, too, that the children may all take such a fancy to this little bee journal that *they* may all be telling about it. And, by the way, friend L., don't you have some little folks around *your* house too?]

Juvenile Gleanings.

FEB. 15, 1883.

Contents of this Number.

American Boy.....161
Bee-tree.....169
Catnip Seed.....167
Darr's Feeder.....161
Drones in December.....163
Drones from W'kr Eggs.....171
Editorials.....172
Finch Children.....167
Fires.....160
Hugh and his Pup.....166
Kind Words.....171
Mark at the Fair.....163
Minnesota.....168
Minty's Letter.....163
Nucleus on Mantel.....163
Queen-cell, Yellow.....167
Red Lights.....162
Swarm Under Hive.....168
Virgil.....158
White Hive.....170

There is none other name under heaven given among men whereby we must be saved.—ACTS 4:12.

WOODEN separators for L. frames, for only 50 cts. per 100, or $1.00 per 1000. We are turning out beautiful ones to-day.

WE can not sell alsike for less than $12 now; if any of the friends have any to dispose of, we should be glad to see sample, and learn the price wanted for it.

UNTIL further notice, I will pay 30 cts. cash, or 32 trade, for fair wax. As I may not be able to buy for 32, or even 35, I dare not take orders for less than 36c; and if you want selected wax, 40c.

THERE is such a multitude of juvenile letters ahead now, I don't know but I shall have to keep the old folks out of the next number entirely, and have a sort of "children's meeting" of it entirely.

THE sap is running some to-day, and we expect new maple sugar in less than a week. We have just got hold of a very pretty maple-molasses can that we can furnish for 15 cts. each, $1.20 for ten, or $11.00 per hundred. They hold a gallon, and have a sort of bail, or handle, to carry them by. As they hold from 11 to 12 lbs., it makes a very pretty honey-pail also.

RYE AND OAT MEAL.

THE time is now at hand when we can feed artificial substitutes for pollen. Friend Muth advertises pea flour, we notice, but we have never seen bees take to any thing as they do to oat meal and rye. For the convenience of our friends who have none at hand, we will furnish it, freshly ground, for 5 cts. per lb. If wanted by mail, 18 cts. extra, for bag and postage.

IT is astonishing to know how low an article can be furnished, when the demand for it is large and unlimited. A machinist could hardly make a single wood screw by hand for 25 cts.; and yet we are now able to sell a whole gross of beautifully made steel screws for the small sum of 10 cents. We can furnish four sizes at this price — ¼, ⅜, ½, and ⅝ inch; ¾ in. will be 15 cents per gross. If wanted by mail, postage will be 2, 3, 4, 4, and 5 cts. each respectively. What excuse can we have now for having work come to pieces?

A WATCH FOR FIVE SUBSCRIBERS, AGAIN.

WE have quite a few Waterbury watches of series "A" on hand, that we will sell at $3.00 each, or give one for five subscribers at $1.00 each. Or, if you choose, a watch to any one who pays for five years in advance. This is the same offer and the same watch that we gave in this way a year ago. The only reason why we make the offer is, that the new watch, series B, has rather thrown it into the shade. I need hardly say, that these watches are regulated and tested by being carried.

C. P. DADANT.

WE were recently favored with a pleasant visit from Mr. C. P. Dadant, of Hamilton, Ill. The Dadants have been having an immense crop of honey the past year, and they have just sold Thurber one lot of 20,000 lbs. at 10 cents. I have lost the figures, but I think their crop was something near twice that amount.

AT one of our young people's meetings we had a new minister preside one evening, and his remarks at the opening occupied just half of the hour we have for the services. After he gave the meeting into the hands of the young people, another good brother spoke 15 minutes, and then it was almost time to close, and the young folks had hardly taken any part at all, although it was a young people's meeting. Do you want to know what that has to do with us? Not much, only the length of some of our good letters of late is rather troubling me. One very good friend of mine has written 50 pages, and some of the rest have letters almost as long, lying by my side unread. What shall I do?

SEVERAL of the friends have felt a little hurt because we have pretty vehemently insisted on the settlement of small amounts, which they were intending to send in when they made their next order. This is all right, friends, if you only say so. Just write to the book-keeper that the account is 'O.K.," and that you will settle it so and so, and I assure you we shall be satisfied; but if we don't get any reply, how are we to know what you propose to do? Surely you can not think we ought to have little balances standing all over the world, without knowing any thing about it. You see, we are compelled to do things by *system*, and can not trust to memory, as we might do with a limited number of customers.

HOW TO SUCCEED IN BUSINESS.

THERE are all the time among our readers young men who are starting out in business for the first time. Many are starting in the supply business, and, I am sorry to say, quite a few who start do not succeed. Why is it? Is it because there is not room enough for all? I do not think that is the reason. Is it because they do not work hard enough? In one sense; but I do not think that is quite it. Some people work *very* hard, and do not get along either. Do you wish to know the secret? It is in making everybody satisfied, and doing every thing not only to the full letter, but to the full spirit of your promise. Now I tell you, boys, this is all in all. In looking the world over I have been surprised and astonished at the reward that comes from faithful service. I am also surprised and astonished to see how soon one who indulges in little evasive tricks is left with nothing to do. What I mean is, that although I should expect a man would not thrive who would twist and slip out of his promises just for the sake of a few cents, I am astonished to see how soon he reaps the reward of his short-sightedness. Or, to come a little closer home, when *I* yield to the temptation to be a little crooked in deal, it surprises me to find *how soon* trouble comes. Selling things low doesn't always bring business. You may put good prices on things, if you choose, if you are only careful to do *all* you promise. Do not only *all* you promise, but do all that any construction of your advertisement may promise, and then see how quickly it shall come to pass, "With what measure ye mete, it shall be measured to you again."

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany....144
Bee Entomology....—
Blasted Hopes....—
Editorials....149
Forgettery....—
Heads of Grain....134
Honey Column....105
Humbugs and Swindles....144
Ladies' Department....132
Notes and Queries....143
Obituary....—
Remindery....148
Smilery....—
"Square List"....—
The Growlery....—
Tobacco Column....148

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES AND OTHER SHORT ARTICLES.

Abutilon....124, 141
Alsike....112
Apiarian Hall....122
Asparagus....139
Axtell's Report....117
Banner Apiary....113
Bee Balm....116
Bee Raid....112
Bee Rock in California....124
Bees, Age of Honey-Gath's....135
Bees to Utah....134
Bees, Length of Flight..134, 140
Bees, New Place for....133
Bees and Neuralgia....140
Bees, Moving....127
Bees, Water for....129
Bees in Cellar Bottom....121
Bees, Uniting to Nuclei....119
Bees, Winter Enemy of....138
Bees, Who should keep?....114
Bee-keep'g for Women..119, 132
Binding Journals....139
Blanks for Bee-keepers....139
Blanton, O. M....113
Blue Thistle....128
Book on Introd'g Queens....130
Buckwheat in Missouri....143
Candied Honey Melting....116
Canada....121
Carpeting Peet Cages....143
Cellars ahead, 60 below zero....135
Chaff Hives, Testing....138
Chicago Markets....118
Christie's Report....119
Circulars Received....151
Clustering, To Prevent....116
Commission Men....118
Corn-sheller Buzz-saw....142
Crates, Giving Away....118
Cyprian Bee—Foster....124
Cyprian Bee—Malone....122
Dummy on Upper Story....121
Fever, The Bee....140
Figwort in Colorado....120
Figwort for Honey, etc....137
Frame-tongs....117
Frames, Wiring for Fdn....137
Hanging Out....141
Harrison's (Mrs.) Letter....112
Heart's-ease....134
Hive, Golden....128
Hives, Chaff....143
Hives, Piling for Surplus....143
Holes in Smoker Grate....139
Honeysuckle....135
Honey, Bitter....134
Honey, To Market....118
Honey on the Floor....142
Honey from Apple....137
Honey, Flood of in Indiana....136
Honey, To Put in Crates....118
Honey, Thick....127
Honey-dew....127
Honey-pails....149
Honey-tree, Our Royal....115
Honey-boards....116
Honey-yield in Iowa....138
Hoya....136
Hybrids Ahead....139
Japan Lily....136
Kansas....127
Machinery for Frames....150
Maple Sugar....133
Matrimony Vine....135
Meal, Sweet-corn....143
Molly Heath Plant....143
Moral Infl. of Apiculture....121
Moth, Squeaking....140
Muth's Report....143
New Zealand....136
Oregon and Wash. Ter'y....140
Patent-hive Men....140
Plan for Honey-house....141
Poinciana Pulcherrima....123
Pollen, New....143
Queens not lay'g if moved....133
Race, The Best....123
Recipes, Selling....149
Reports, Large....139
Rocky Mountains, etc....120
Sawdust v. Snow....143
Sections, Dispensing with....136
Sections under Brood-nest....129
Sections, 1-pound....116
Sections, Smaller....126
Sections, Walker's Impr'd....150
Separators, None....118
Simp. Hives, To put up....143
Snowdrop....144
Snyder's Letter....126
Spring Dwindling....142
Spring Feeding....117
Swarm, Absconding....136
Swarming by Moonlight....123
Syrup, Scented....131
Tomato that yields Honey....142
Ton of Honey in 8 days....128
Vail's Report....135
Water-fountain....129
Wax-extractor, Jones's....120
Wax, Hatch's Experiments....125
Wheat-stubble....144
Wind-breaks....134
Windows, Wire-cloth....115
Woman's Success....133
Workers, Fertile....131

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AT THE LOWEST PRICES.

Italian Queens and Bees.

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SEEDS, PLANTS, VINES, BULBS, ETC.,
at growers' prices, grown at my seed farm, fruit garden, and apiary. Descriptive catalogue free.
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QUEENS AND NUCLEI IN SEASON.
3tfd Circular on application.
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Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 1tf
*Paul L. Viallon, Bayou Goula, La. 1tfd
*S. F. Newman, Norwalk, Huron Co., O. 1tfd
*Wm. Ballantine, Sago, Musk. Co., O. 1tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2
*Jas. A. Nelson, box 83, Wyandott, Wy. Co., Kan. 5-5
*J. P. Sterrit, Sheakleyville, Mercer Co., Pa. 2-7
Bates & Miller, Barrington, Bristol Co., R. I. 2-4
*Chas. R. Mitchell, Hawkinsville, Pulaski Co., Ga. 2tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
*Dr. A. B. Mason, Wagon Works, Lucas Co., O. 2-8
*Jas. O. Facey, New Hamburg, Ont., Can. 2tfd
F. J. Wardell, Urichsville, Tusc. Co., O. 3-9
*S. C. Perry, Portland, Ionia Co., Mich. 3tfd
*J. H. Reed, Orleans, Orange Co., Ind. 3tfd

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Who agree to make such hives, and at the prices named, as those described on our circular.

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M. S. West, Flint, Gen. Co., Mich. 1-6
T. G. Ashmead, Williamson, Wayne Co., N. Y. 2tfd
S. D. Buell, Union City, Branch Co., Mich. 2tfd

1883— —1883
ITALIAN QUEENS.
I am now booking orders for queens. I cull my queens as they hatch, is the reason my customers were so well pleased last year. Send me your address on postal, and get circular. Six for $5.00. **J. T. WILSON,**
1tfd Mortonsville, Woodford Co., Ky.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian supplies. Send for circular. 1tfd

100 NICE straight TULIP or POPLAR TREES for $1.00, sent by express. Better than linn for honey; beautiful for shade, and good for timber. Address CHAS. KINGSLEY, Greeneville, Tenn.

For Sale. A small cheap Engine, just right to run the Barnes foot-power machine. Is in good running order. Correspondence solicited.
3-4d ALBERT POTTER, Eureka, Win. Co., Wis.

$1.75. One Italian queen and one dozen Plymouth Rock Eggs, or 1 package of Seed Corn. Orders filled in rotation.
3d Address **H. BARBER,** Adrian, Mich.

Full Stocks of
YELLOW BEES FOR SALE!

WARRANTED NOT EXCELLED.

J. M. MARVIN, 3-5d
St. Charles, - Kane Co., - Illinois.

SAVE MONEY!

Nuclei, 3-frame and tested queen	$3 50
Nuclei, 3-frame, untested "	3 00
Nuclei, 4-frame and tested "	4 50
Nuclei, 4-frame, untested "	4 00
Tested queens, after May 15	2 00
Untested queens, after May 15	1 00
Full colonies in Simplicity hives,	8 00

Will ship full colonies in April. I will guarantee every thing I send out to be first-class.
3tfd DAN WHITE, New London, Huron Co., O.

BASSWOOD-TREES OF ALL SIZES,
—AND—
ITALIAN BEES EARLY IN THE SEASON.

ALSO QUEENS AND BEES BY THE POUND.

Basswood-trees,	8 feet,	10 cts. each.
" "	4 feet,	6 cts. "
" "	2 to 3 feet,	$2.00 per 100.
" "	1 foot,	$1.25 per 100; $8.00 per 1000.

Last chance: send for prices.
3d A. W. CHENEY, KANAWHA FALLS, FAY. CO., W. VA.

BEES FOR SALE IN IOWA.

50 to 75 Colonies choice Italians, from noted pedigree. These will be about as follows:—1 new painted Simplicity hive, worth $1.00; tested queen, $2.50; 2 lbs. bees, $3.00; 10 L. combs with brood and honey, $3.50. Total, $10.00. That is in April. In May, $9.50. June, $9.00; July, $8.00. Three-frame nuclei with tested queen, 1 lb. bees, 3 combs, brood and honey, one-half as much as full colony. Safe arrival guaranteed. My 156 colonies are O. K. to date. In case of loss, I may not spare so many.
OLIVER FOSTER.
Mt. Vernon, Linn Co., Iowa., Feb. 20, 1883.

A FAIR OFFER.

All bee-keepers purchasing a dollar Italian queen of me the coming season will receive in connection, if desired, a plan for making a PORTABLE PLANK FENCE, or a CHEAP RAIL FENCE.
Address **A. COX,**
1-3 White Lick, Boone Co., Ind.

A NEW IMPORTATION OF CHOICE

Bokhara Clover Seed

has arrived, and is for sale cheap. Apply to
12-3d CHAS. F. MUTH, Cincinnati, Ohio.

E. T. LEWIS & CO., TOLEDO, OHIO, Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

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CARDS!

50 MIXED, or 25 TRANSPARENT; no two alike, or 25 GILT EDGE, with name, 10 cts. Circular of Novelties free. J. TOMLINSON, Medina, Ohio. 3tfd

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IMPORTED QUEENS.

In April,	11 francs in Gold.
May and June,	10 " " "
July and August,	9 " " "
September and August,	7 " " "

No orders received for less than 8 queens. Queens which die in transit will be replaced only if sent back in a letter. 1-6d
CHARLES BIANCONCINI & CO., Bologna, Italy.

1883 FOR SALE! 1883

Five-frame (Langstroth frame) Nuclei, consisting of a pure, young, fertile Italian queen, carefully bred from best imported or home-bred mothers, with five new wired combs filled with brood and honey, and covered with young bees. Better than a natural swarm. Send for circular and price list.
WILLIAM LITTLE, 3d
MARISSA, - - ST. CLAIR CO., - - ILLINOIS.

GOLDEN POLISH CHICKENS!

10 prize-winning fowls; beautiful birds, bred with great care, boxed, $15.00, or 4 hens, 1 cockerel, $8.00.
3d THOS. F. WITTMAN,
Model Bee-Hive Co., 52d and Jefferson St., W. Phil'a.

FOR SALE: FORTY COLONIES OF ITALIAN BEES

In Langstroth and Modest Hives.
PRICE FROM $5 TO $8. 3
E. A. GASTMAN, DECATUR, MACON CO., ILL.

FOR 1883. Choice Italian queens, bred from imported mothers. 30 colonies of Italian Bees for sale in April and May. Nuclei and bees by the pound. Send for circular. 3d
SIMON P. RODDY, Mechanicstown, Fred'k Co., Md.

Wood Separators, Sections,

GLASS IN STRIPS, FOUNDATION, WIRE NAILS, SMOKERS, TIN POINTS FOR GLASSING, ETC.

C. R. ISHAM, or C. J. VAN EATON,
Peoria, Wyo. Co., N. Y. 3d York, Liv. Co., N. Y.

LOOK! A neat stencil for marking clothing, &c., for 35c. Three to one address for $1.00 postpaid. Address JOHN COULSON,
1-3d East Rochester, Col. Co., Ohio.

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60 Colonies of
ITALIAN BEES FOR SALE!

H. NEUHAUS, 3d
Burlington, - Racine Co., - Wis.

XXX

For the next thirty days I will book orders for dollar queens to be delivered in July or August, at seventy-five cents each. Single queens to new customers, fifty cents. No order for over five queens received from any one party. I am a new man to many of you. Give me a trial.
3d C. M. GOODSPEED, Thorn Hill, Onon Co., N. Y.

SEND 10 CENTS and get a large package of Mixed Flower-Seeds, containing over 25 of the choicest kinds; and 25 cents for 10 packages of Garden Seeds. Name some desired (except beans, corn, and peas), and I will send if possible. All the above for 30 cents. Parties sending one dollar during this month for an Italian queen, sent in July, will receive the above free by return mail. Send for Price List of Seeds. J. G. LEHDE, Gardenville, Erie Co., N. Y.

WE will work wax on shares, one-half for the other, for anybody who will send it to us, and pay freight both ways. A. R. NISBET,
3d Dobyville, Clark Co., Ark.

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20 GOOSEBERRIES by mail, $1.00. Good roots; Houghton's seedling; bears well; produces honey very early. Address
CHAS. KINGSLEY, Greeneville, Tenn.

WANTED.—The management of an apiary in Northern Ohio, or perhaps in other States.
3d HENRY GRAHAM, Port Perry, Ont., Can.

Sweet - Clover Seed.

New and clean, 25 cts. per lb.
1-4 BEN CLENDENON, Grinnell, Iowa.

1883 Italian Queens. 1883

STILL THEY GO!

Ready to ship April 1st. Reared from the eggs in full colonies from imported and home queens. No in-and-in breeding. All drones reared from choice stocks. Our queens are guaranteed to be as good and large as any in the U. S. Warranted queen, $1.50; untested, $1.00. Tested, $3.50. Purely mated, $2.00 Safe arrival and satisfaction guaranteed. Send for circular. **T. S. HALL,**

3d KIRBY'S CREEK, JACKSON CO., ALA.

SEND FOR A Small Fruit

CATALOGUE TO OHIO RASPBERRY *A SPECIALTY.*

J. IRVIN JOHNSON,

PALMYRA,

WAYNE CO., - N. Y. CHEAP.

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HEADQUARTERS In the West

Having fitted up our shop with new machinery, we are prepared to furnish all kinds of Apiarian Supplies; Simplicity, Chaff, Langstroth, and other hives.

ONE-PIECE SECTIONS, $5.00 PER 1000.

BEES and QUEENS.

DUNHAM FOUNDATION AT BOTTOM PRICES!

SILVERHULL BUCKWHEAT, $1.50 PER BUSHEL.

Job Printing done on Short Notice.

LARGE NEW LIST FREE.

BRIGHT BROTHERS,

MAZEPPA, - WABASHA CO., - MINN.

FOR SALE!

QUEENS, BEES, COLONIES, COMB FOUNDATION, BROOD AND BROAD FRAMES, HIVES, SHIPPING-CRATES, HONEY-EXTRACTORS, HONEY-KNIVES, BINGHAM SMOKERS, PRIZE HONEY-BOXES, AND

EVERY THING A LIVE BEE-KEEPER NEEDS.

Send me an order and I will please you, I know.

F. A. SALISBURY, 3tfd

GEDDES, ONONDAGA CO., NEW YORK.

ITALIAN BEES, TESTED AND UNTESTED. QUEENS, SILK-WORM EGGS, ETC., ETC.,

NOW READY AT *REDUCED* PRICES.

Circulars on application.

3tfd CHAS. R. MITCHELL, Hawkinsville, Ga.

AT KANSAS CITY, MO.,

I BREED PURE ITALIAN BEES FOR SALE.

Dollar Queens, in May	$1 50
" " in June	1 25
" " after June	1 00

Tested queens double the above prices.

Bees per ½ lb., same prices as dollar queens.

I *warrant* my *dollar queens* to be purely mated. I do not know that I have a single dissatisfied customer; but if there are any such, and they will write me in regard to the matter, I will do the best that I can to render satisfaction.

3tfd **E. M. HAYHURST, P. O. Box, 1131.**

PURE ITALIAN QUEENS,

Carefully bred from imported and home-bred mothers. Sent by mail. Safe arrival guaranteed. No black bees near.

1 untested queen before July 1, $1.25; after, $1.00
6 " " " " 1, 6.50; " 5.50

Tested queens, nuclei, and full colonies.

PLYMOUTH-ROCK FOWLS.—Eggs from this justly celebrated breed of fowls, $1.25 per setting of 13. Send for circular free. J. H. REED, Orleans, Orange Co., Ind.

THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan., 1883. Will guarantee safe arrival of every number.

A. I. ROOT, Medina, Ohio.

CONTRACTS WANTED

WITH

SUPPLY DEALERS,

For next year's stock of Bee-hives and fixtures. We are securing new machinery and buildings, and better facilities in every way to manufacture extensively. *Dealers*, and those who contemplate becoming such, are requested to write for estimates on job lots of hives, sections, etc. We will make *specialties* of chaff and Simplicity hives, but will make other styles, if unpatented, and ordered in considerable quantities. Let us know the kind and probable quantity of goods you expect to handle, as well as any other information you may deem necessary, and we will send you prices that we are confident will be satisfactory.

S. C. & J. P. WATTS,

10tfd LUMBER CITY, CLEARFIELD CO., PA.

MUTH'S

HONEY EXTRACTOR,

SQUARE GLASS HONEY JARS,

TIN BUCKETS, BEE HIVES,

HONEY SECTIONS, &c., &c.

Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers." 1tfd

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The Excelsior Poultry Yards

are always well stocked with Pure-Bred Poultry and Italian Bees; Extractors, Foundation, Hives, etc., for sale. Job Printing of every description done cheap for cash. Circulars free.

Address J. T. FLETCHER, West Montery,

12-9d Clarion Co., Pa.

Honey Column.

CITY MARKETS.

CINCINNATI.—*Honey.*—No change whatever from last month in the market for honey and beeswax. There is an abundance of comb honey in our market, of choice quality, for which there seems to be no demand. We have offers from commission houses at almost any price. There is a good consumptive demand for extracted honey. We had the highest water known in the history of Cincinnati. Water went into the 2d and 3d stories of houses; hundreds of frame houses were tilted over or upset in the lower part, and the outskirts of the city. We are, fortunately, above high-water mark.
Cincinnati, O., Feb. 21, 1883. CHAS. F. MUTH.

DETROIT.—*Honey.*—There is but little doing in the honey market, the demand being very light. Good white comb honey is offered at 17@18 cents; dark, at 14@16 cents, but no buyers.

Beeswax is scarce; quoted at 30 cents.
Detroit, Mich., Feb. 23, 1883. A. B. WEED.

CHICAGO.—*Honey.*—Honey is very slow sale; prices are nominally the same, and the supply is plentiful.

Beeswax is just the reverse. I am paying 30 cents cash on arrival for good yellow wax, and 17@25 cts. for dark and off colors. ALFRED H. NEWMAN.
Chicago, Ill., Feb. 21, 1883.

CLEVELAND.—*Honey.*—Honey has been exceedingly dull during Jan. and Feb. It is only within a week that any sales have been made, at prices ranging from 19@20 for white 1-lb., and 18@19 for white 2-lb. sections. Extracted still moves very slowly at 10@12.

For *beeswax* we have many inquiries, but no wax.
Cleveland, O., Feb. 15, 1883. A. C. KENDEL.

BOSTON.—*Honey.*—We quote you white one-pound comb honey, 25c.; two-pound do., 23c; dark not wanted. Extracted, slow sale. We have no honey on hand of any amount; our market is almost entirely gone from first hands. CROCKER & BLAKE.
Boston, Mass., Feb. 23, 1883.

NEW YORK.—*Honey.*—In reply to yours of the 20th inst., permit us to quote honey as follows:—

Best white,	in 1 lb.	sections	(no glass)	per lb.,	21 to 23.
"	" 2 "	"	(glassed)	"	20 " 22.
Fair	" 1 "	"	(no glass)	"	19 " 20.
"	" 2 "	"	(glassed)	"	17 " 18.
Buckwheat,	" 1 "	"	(no glass)	"	17 " 18.
"	" 2 "	"	(glassed)	"	14 " 15.

White-clover extracted honey, in small bbls., 9@10.
Buckwheat " " " " " 8@8½.

Beeswax.—No beeswax to quote.
Feb. 26, 1883. H. K. & F. B. THURBER & Co.

I have six 55-lb. kegs of white extracted honey—3 of clover, 3 of heart's-ease. Will put on cars for 9c. per lb. R. J. BARBER.
Bloomington, Ill., Feb. 14, 1883.

I have 3000 lbs. of honey, basswood and clover, all warranted to be first class, in kegs, which I will sell at 10 cents for basswood, and 11 cents for clover, delivered on board the cars here, or at Monticello. Kegs hold 115 lbs. MONT WYRICK.
Cascade, Ia., Feb. 26, 1883.

ADVERTISEMENT.
Every lady should send 25 cents to Strawbridge & Clothier, Philadelphia, and receive their *Fashion Quarterly* for 6 months. 1,000 illustrations and 4 pages new music each issue.

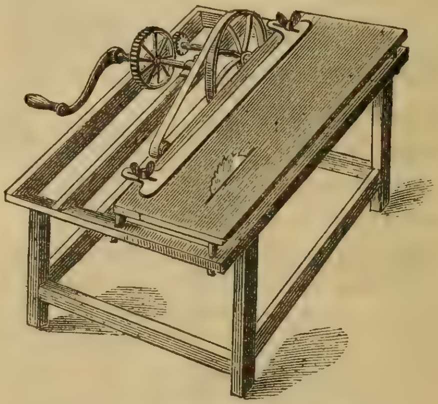
A GOOD HONEY - PLANT.
100 BUCKTHORN-TREES by mail, postpaid, $1.00. Address
CHAS. KINGSLEY, Greeneville, Tenn.

PATENT FDN. MILLS. 6-inch, $10.00. 10-inch, $15.00.
2tfd WM. C. PELHAM, Maysville, Ky.

NOTES FROM THE BRIGHT-BAND APIARY.

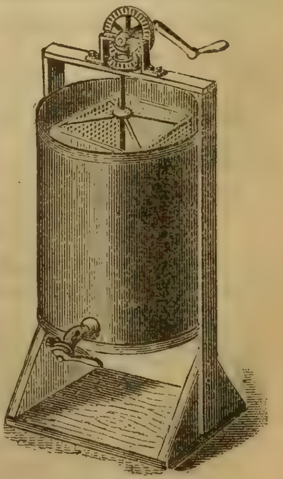
FRIEND KINGSLEY'S ADVERTISEMENT, NO. 1.

THERE are two things a great many of us need, but are without, on account of the high price generally asked for them, and that is, a hand-power buzz-saw and extractor. By proper management I am able to make and furnish either at a much less sum than is generally asked. I will first give you a picture of the saw.



PRICE $25.00.

I am glad of having the privilege of bringing this saw before you all, as I have never seen any thing that would equal it, either in rapidity or quality of work. It is very handy, as one hand can do the turning and sawing too, and, at the same time, is not very hard work, unless you get into a "big" hurry. The whole thing is gotten up in first-class workmanlike style, and all you have to do when you get one is to put the crank on and go to sawing. Seven-inch saws will be used, unless some other size is ordered. All who have hives, queen-cages, section boxes, etc., to make should order one before spring.



PRICE, $5.75.

And now for the extractor. This is made very much on the style of Novices, only it is set in a light but strong wooden frame, which makes it convenient to set almost any kind of a vessel under to hold the honey, and about the right height to "save one's back." It also makes the gearing stronger.

Now, friends, both the saw and extractor are gotten up in first-class workmanlike style, and I shall take pride in trying to please all. Price of saw, $25.00. Same for power, without hand-gearing, $15.00. Will make a machine for dovetailed sections to set on top of the saw-table, and to be run by the same belt, for $10.00. Price of extractor, any size not larger than for Langstroth frame, $5.75; for a larger size than this I shall probably have to charge a little more.

Very truly yours, CHAS. KINGSLEY.
Greeneville, Greene Co., Tenn.

For Sale. Colonies and Nuclei of Italian Bees, Queens, Extractors, Bee Books, and Supplies. Address OTTO KLEINOW,
3tfd opposite Fort Wayne, Detroit, Mich.

GLEANINGS
IN
BEE CULTURE.
DEVOTED TO BEES HONEY & HOME INTERESTS
F.A. Whiting

Vol. XI. **MAR. 1, 1883.** **No. 3.**

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

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NOTES FROM THE BANNER APIARY.

NO. 40.

AMONG THE BEES AND BEE-KEEPERS OF MICHIGAN.

I HAVE just returned from a visit to some of the most prominent apiarists of this State; and thinking that a description of their apiaries and methods might be interesting to the readers of GLEANINGS, I venture to send an account of the trip.

MR. J. H. ROBERTSON'S APIARY.

First upon the list of bee-keepers is Mr. J. H. Robertson, of Pewamo. Mr. R. commenced bee-keeping about 20 years ago, when log gums and box hives were the rule, and the getting of honey by having it stored in large boxes placed upon the tops of the hives was considered the *ne plus ultra* of perfection.

A ONE-ARMED BEE-KEEPER.

Although friend R. left his good right arm upon a Southern battle-field, he did not leave his Scotch determination and will; and the misfortune that would have dampened the ardor of most bee-keepers seemed only to spur him on to greater efforts. I have been informed that friend R. can handle bees as rapidly with his one hand as many bee-keepers do with both; and after passing two days in his company I can easily believe it, as he gets about and handles everything so easily and rapidly that I sometimes really forgot that he had only one hand. He has owned as many as 500 colonies at one time, and obtained as high as 30,000 lbs. of extracted honey in one season. Although others may find that the production of comb honey is the most profitable, friend R. feels certain that extracted honey is the most profitable for him to raise. He says, that if he does not extract the honey, his bees get the swarming fever, and he loses all control of them in this respect.

THE RAILROAD ARRANGEMENT.

His lines stand in long rows, and he has a track upon which to run a car for carrying hives, colonies, honey, etc., to and from the apiary.

A MODEL WINTERING CELLAR.

At one side of the track stands his wintering cellar, which it will scarcely do to pass without a description. It is perhaps 16 feet wide by 40 feet long, outside measurement. First an excavation, 3 or 4 feet deep, and as long as the inside of the cellar, was made, then two walls of boards, 6 or 7 feet high, and about 3 feet apart, were built around the outside. The space between the walls was filled with dry earth, a covering of boards or planks laid over the cellar, and then a roof of boards over the whole. The chamber floor was made frost-proof by covering it deeply with sawdust. The cellar is ventilated by one or more tubes passing up through the chamber floor and its covering of sawdust. A thermometer is let down, by means of a string, through a tube that passes through the sawdust and chamber floor. The thermometer can be drawn up, and the temperature ascertained at any time without entering the cellar. Friend R. says that the temperature is very even throughout the entire winter and spring. The cellar is furnished with double doors.

RUNNING WATER IN A WINTERING CELLAR.

At one end of the cellar is a spring that usually causes a stream of water to flow through the cellar; but at the time of my visit it was not furnishing any water, and friend R. shoveled bushels of snow into the cellar every few days. The snow gradually melted, and kept the air fairly loaded with moisture. There were 350 colonies in the cellar, and I tell you they were in splendid condition. By the way, I will say that friend R. saves out combs of early-gathered, well-ripened honey, to give the bees when preparing them for their winter quarters. He numbers each hive in the fall, and each stand is furnished with a number corresponding to the hive that is taken from it; and he is particular, when carrying the bees out in the spring, that each colony shall be placed upon its old stand. He says he has had the bees mix up badly, and lost many queens by setting the hives out promiscuously.

Friend R. has a Dunham fdn. mill, but thinks seriously of discarding it for a Given press. He considers the making of fdn. as hard, disagreeable, and particular work; and were it not for the fact that the work can be done at odd spells, and that freight charges and delays are avoided, he would buy his fdn. instead of making it.

THE L. FRAME.

He uses the Langstroth frame, and says that, even if he did not like it any better than other frames, he would use it simply because the majority of bee-keepers use it; the bees being more salable, and supplies being more readily obtained.

A RAID AMONG THE BEES, AND HOW IT STARTED.

He gave me a very graphic account of how the exposure of an open crate of honey in front of a store had so aroused his bees, that for a day or two the business of the town was almost suspended; every building had to be shut up "bee tight." He immediately commenced feeding his bees, and in this manner drew them away from the town, and finally got them under control.

Friend R. hitched up "Johnny," and we drove out about three miles to see a bee-keeper by the name of Balch. Mr. B. has a bee-cellar similar to Mr. R.'s, only smaller. Mr. B. shoveled the snow away from the door, and we entered. If I remember rightly, there were about 40 colonies in the cellar, only two of which showed any signs of dysentery, and that only in a slight degree. The cover was removed from a strong colony near the door, and some of the bees flew out of doors.

DO BEES REMEMBER THEIR LOCATION OVER WINTER?

When we left the cellar, Mr. B. called my attention to the fact that these bees lay kicking upon the snow just under the plum-tree where their hive had stood; *these* bees certainly remembered the location of their old home.

ALSIKE CLOVER.

Alsike clover is largely grown near Pewamo. We visited one man who had 500 acres of this clover. Mr. R. advises the pasturing of alsike until the latter part of June; it will then blossom just after basswood, and will yield two crops — one for honey and one of seed.

In addition to the bee business, Mr. R. is largely engaged in the stave business. We intended to visit friends Roop and Goodno, of Carson City, but the storm prevented. W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., Feb., 1883.

(*Concluded next month.*)

Friend H., that was a wise "speculation" of yours, in going to see friend Robertson; and not only for you, but for the rest of us. —You have dropped a hint in regard to a running stream for keeping a cellar cool, and for keeping the air at all times at the proper degree of moisture, that is new to me. Shall we not follow it up? — I wish the man who has 500 acres of alsike would sell us some seed. It is now worth $15.00 a bushel, and, what is worse, like the beeswax trouble, I don't know at present where we can get any more at any price. If any brother has any, will he please speak out?

MRS. HARRISON'S LETTER.

SOME SUGGESTIONS FOR BEE-KEEPING WOMEN TO AVOID MOVING HEAVY HIVES IN SWARMING-TIME.

IN GLEANINGS for Feb., Cyula Linswik requests me to tell how I manage. I have not strength to move "heavy hives," so I let them alone. My endurance is greater than my strength; and if bee-keeping required such an outlay of it as to move heavy-laden hives, I could not keep bees. I infer that the sisters Linswik clip their queens' wings, and then remove the old hive, putting a new one in its place, knowing that the colony will return as soon as they find their queen is not with them. This may be as easy a way as any other when there are two to do the lifting; but certainly not, where there is only one. We have never clipped queens' wings; and when our bees issue, they cluster. Hives are prepared for colonies, and placed in different parts of the apiary, and we shake them down into a large dish-pan, and pour them down before the hive which is nearest to where they clustered. Very few of our bees have ever clustered very high, and it is rare that any have crossed the street before clustering. Last summer I was alone, and a colony clustered in the top of quite a large cherry-tree. I went up on a step-ladder, and tied a long clothes-basket, with a handle at each end, directly under the cluster. I then got a long strip of pine, such as are used for battens, and drove a nail in the end, and ran it into the cluster, catching hold of a limb, and then shook the bees off. A good many fell into the basket, and I suppose the queen was among them, for they all gathered in and upon it. I have never seen the Brooks swarm-catcher, I believe.

Josh Billings says that he always likes to know what kind of advice a man wants, before he gives any; but I feel as though I must put in a word. Two ladies, owning 75 colonies of bees, could afford to be liberal with their help; and if they would offer three, four, or even five dollars per week for the months of June, July, and August, it would be better than selling their bees. I said to a friend this fall, "You have excellent help;" and the reply was, "The way I obtained this splendid worker was by offering more than any one else is giving."

I love to work, and I am not happy unless usefully employed. But there are kinds of work that do not agree with my health or feelings, such as sewing, or cooking over a hot stove in warm weather. I have this work done by proxy, much better than I can do it, and at the same time benefit others by giving them employment. The girl who does the housework screeches if a bee flies into her domain, and I thought the dressmaker was going to church when I saw her out in the yard with her hat, veil, and kid gloves on. Yet I enjoy working in the fresh air and sunshine, with bees for company; and my husband says if he ever gets to heaven he expects to see me coming along with a bee-hat on, and smoker in hand.

Whether bee-keeping is too hard for women, should be viewed from different standpoints, as we are so apt to measure other people's wheat in our own half-bushel. As an illustration, when I was at the North-Western Convention at Chicago, several bee-keepers spoke disparagingly of my bee-hat; but if my head could be changed to their shoulders, they might think differently. By putting on a wet head-cap, and an airy wire hat, I can work safely in the hot sun, when it would be rash to go out without it, as I have a tendency to apoplexy, and my head would feel like bursting, with a hat and veil.

I do a good deal of headwork, planning to have the work as light as possible during the busy season. All of the plain sewing, such as the making of calico dresses, underclothing, aprons, sun-bonnets, etc., is done during the winter. The house is cleaned early; and when the closets are overhauled, and paper-rags picked up, the suitable ones are rolled up and tied for fuel for smokers—plenty to last during the season. Gloves are mended, wire hats put in order, and, as the season advances, hives are put in position for new colonies. It is true, that during the busy season I have little time for visiting, but I make up the lost time during the rest of the year. I have made money and I can afford to attend a bee-convention, or take a trip to the mountains or seashore. From my standpoint, it seems as though the sisters Linswik, with their eleven years' experience, and the amount of bees they have, ought to clear a thousand dollars per year. By taking time by the forelock, and securing help, one at a time might skip off to the mountains for rest and recuperation; and at the close of the season be fresh and vigorous with plenty of spending-money.

I want to say to Cyula, before closing this article, when you talk of selling your bees, *don't;* but if, in spite of my protest, you shall persist in so doing, it will not be the least of my regrets—the losing from among our number one who wields so graceful a pen as Cyula Linswik. MRS. L. HARRISON.

Peoria, Ill., Feb., 1883.

I warmly second your concluding words, Mrs. H.; and in regard to hiring good and efficient help, I would say that we sometimes make a mistake in using too much economy. I have several times felt as if I really could not afford the price that some good man wanted; but I soon found out that it was a plain saving of money to pay a good, honest, faithful hand enough to make him feel happy, and with it a determination to work hard for my interests. Somebody has mentioned that Mrs. Axtell's honey crop will net over $5000. Just think, Cyula, how much good you might do in your own neighborhood by giving employment, and developing the latent talent that lies slumbering about you. No, I am not mistaken. Over and over again have I seen a little kind care and teaching bring out intelligence that surprised the neighbors, and the one that possessed it, more than anybody else, perhaps. Just look about you now, until your eye catches on some child that is hungry for work, and then accept the charge as a commission from the loving Savior, and teach that child as you would if the Master had said to you direct, "Inasmuch as ye do it unto her, ye have done it unto me." When the child begins to take hold, and feels proud and happy because she is succeeding, and tries to show her love and gratitude to you by kind looks as well as kind offices, you will feel a thrill of joy that nothing else in this world that I know of can equal. If you have trials and perplexities and discouragements, let them serve to drive you to the Master, and blessings of all kinds will come as surely as the rising of the sun.

Are those who write the bright little letters in our JUVENILE GLEANINGS any smarter than the boys and girls in the vicinity of your own home? Surely not. To be sure, every child may not have a taste for bees, and one therefore would need to exercise a little wisdom in selecting one for trial; but give me the boys or girls who like work, and whose circumstances make it needful that they should have work, and I have seldom failed in enlisting their enthusiasm. While they do manual labor, also teach them to do writing, and to thus get hold of the machinery of the great busy world. I have been addressing these words to Cyula; but, my good friend Mrs. H., they will apply to you too, although you have started out a little in that direction; and not only you, but a thousand others who have got where they can see how great is the harvest, and how few are the really conscientious, intelligent laborers. It is our own fault, friends. The material lies all about us, and it is, to a great extent, *our fault* that it develops into selfishness, and sometimes even crime. "Ye are my witnesses."

SOME OF OUR GREAT HONEY-PRODUCERS.

TAKING A LOOK AT THEIR FACES.

FRIEND BLANTON is not only a big bee-man, but he is a big man as well; and he is not only big in body, but, like all other big bee-men, he is a big-hearted, jovial fellow. When at Cincinnati, he, with friend Jones, Muth, and neighbor H., almost made me feel small. Besides that, while we were riding around the city they actually went to laying traps for my innocent and unsuspecting country feet. You see, we passed a big shop where they had barrels and hogsheads and tierces of something that I thought might be beeswax (I declare, I wish it were beeswax now), but it wasn't beeswax at all; it was only tobacco, and friend Jones said it would ruin my smoker business, sure, and I might just as well give up, for they would make tobacco a good deal faster than I could make smokers. And then after a while friend Blanton said, very soberly and solemnly, that he had a great notion to give up the use of tobacco; and then friend Jones gave him a long brotherly talk about the evils of the weed, and about his influence and example, until he finally declared he would give it up, if I would give him a smoker. Friend J. then made a few closing remarks about always feeling happy when he was able to induce any one to give up a bad habit; and there those big chaps were all the while laughing in their sleeves, because friend B. had *never used tobacco at all.* Never mind; I forgive them, and here is the picture of the man who has sold friend Muth pretty well toward a hundred barrels of beautiful honey, as the product of his own apiary, in a single season.

DR. O. M. BLANTON, THE HONEY-MAN OF THE SOUTH.

He lives in Greenville, Miss.; and if you don't believe his honey is nice, when you take dinner at the lunch-room next time, just ask for some of the palmetto honey. You see, friend Muth sent me a whole dozen jars of it, and I keep it to give bee-friends; and if friend Muth will send us a photo, we will have a look at his genial face next time; won't we, boys?

WHO SHOULD KEEP BEES?

SOMETHING ABOUT OVERSTOCKING, ALSO.

FRIEND ROOT:—May be you're not my "friend;" but as long as you claim me for yours I shall hold on to you. Several years ago I entertained and freely expressed (that is, as freely as the papers would let me) some conservative ideas regarding who should keep bees. Since that time I have not changed my mind regarding my conservatism; for facts coming up from time to time have *forced* me to hold the closer to my former conservative opinions. Since that time there has been a great change of belief regarding this question, and how much we should urge others to become bee-keepers; and also a clearer understanding of my former ideas upon the subject. Illustrative of this, compare my former articles with the recent one of Dr. C. C. Miller, in this year's *A. B. J.*, page 36. Here is a man whose head and heart none can be induced to doubt. Now you realize (see last GLEANINGS) that localities can readily be overstocked, and all can then readily see how important it is that every apiarist have the *whole* pasturage of the area in which his bees work — an area of about six miles diameter. Now, is it not just, honorable, yea, even a duty to you and yours, and much wiser as well as better for *all* concerned, that we do *not* "rush in after the neighbors" to come and see the "wonderful" results of a bountiful season?

Is it not true, that while we might at once influence them with the large profit of our summer's capital and labor, it might take more time and effort than we possess to show them that these results are above the average; that seasons of study, experiment, and losses, have been experienced, to get the knowledge which forms the greater factor making up this success; to impress upon their minds that no two apiarists can both realize such a yield in one field; that we know, that, if they should keep bees "just over the way," such bee-keeping would be a direct damage to us (as for economy, we wish to keep all the colonies our field will support); and while their bee-keeping is to us a damaging influence, *ours* will prove *ruinous* to them. Why should we *labor* to do justice, when silent rest will accomplish the same result?

In years past, some tried to answer these arguments by pointing the finger of scorn. While this sometimes silences the one who argues, it *never* replies to his arguments; and sooner or later they arise and demand logical answers. When we were told that our business was exceedingly profitable, and eminently adapted to invalids, children, and women, I thought that was a slur on those succeeding in the pursuit, and a rather poor classification for the ladies. I said so, and at the expense of being misunderstood, and consequently condemned, by the gentler sex.

Were I keeping store, and an agent should appear with a new article of merchandise, and say, "Oh! it's a big thing; profits are enormous; sales are immense; you can sell thousands in this village," I would, were I persuaded to think so, say, "Who else here are you going to convince of this, and sell to?"

Suppose I tell farmer Jones, in township 2, that, with my patent hive (as there are no bees in the township) he can realize large profits on an apiary, and then I go to 3 or 4 of his neighbors and tell them the same thing, and get all of them started in business once based on fact, but that I told so many times it is now based on falsehood, what would Jones say? What ought he to say? If you should tell me, "Oh! say bee-keeping is just a bonanza," I would be expected, by this practical world, to say, "Well, well, I see it; just you keep still now, and don't 'kill the goose that lays the golden egg.'"

One alluring and deceptive fact connected with bee-keeping is, that a few colonies pay much better, pro rata, than a number sufficiently large to make the business a profitable specialty. "One colony of bees paid me $43.28," says one.

"Well, what of it? that won't buy your clothes, nor board you for a year."

"Yes, but I'll have 100 colonies; see here: $4328."

Comment is unnecessary.

Well, does this argue in favor of mixed production, and keeping a few colonies? Not a bit of it. If all kept a "few colonies," overstocking down to a profitless point would continually occur; besides, such is not the nature of things, as specialty carries with it an economy that would soon run the business all into the hands of about one or two bee-keepers in a township; and the law of the survival of the fittest would select these men.

Dowagiac, Mich., Feb. 7, 1883. JAMES HEDDON.

Concluded next month.

OUR ROYAL HONEY-TREE.

A PLAN FOR PROLONGING THE LINDEN SEASON.

THE linden, or basswood, so far excels all known honey-trees, that it has no competitor anywhere near, close enough to be a rival. And, compared with the average run of trees, its period of bloom is quite long; but the bee-keeper feels sad, and the bees feel " like a bear robbed of her whelps " when the blooming is finally over. It would be very nice if we could prolong the linden season by planting road-sides and pleasure-grounds and timber-plantations with some kind of lindens that bloom at a different season from the wild ones. In December's *Exchange* of 1878 I agitated the idea of planting European lindens for this purpose. Reports were sent in from trees already established in this country; and it turned out that, instead of blooming later, they bloom two weeks earlier than ours — although in the botanical flora they are marked "June — August." This was rather a disappointment, but we got two important facts, at any rate; one, that we can prolong the linden season in the other direction from what we were thinking of; and the other, that lindens change their time of bloom when taken to a different climate. This last fact is greatly emphasized by the report given in the *A. B. J.* last summer, of the blooming of American lindens in the botanical gardens of Stockholm, Sweden. How late do you suppose our basswoods bloom when taken over there? September fourteenth!

Well, following the report previously mentioned, H. A. Davis wrote from Western North Carolina that lindens bloom well into August there; and that, if taken north, he believed they would bloom much later. To test the matter I sent for half a dozen little trees by mail — hope the boys won't say, " You stingy churl, why didn't you send for some great big ones by express?" I'll do the best I can to make amends, by pushing the trees ahead. My trees were set March 22, 1880. One died; three fell into that state of hopeless stuntedness to which transplanted forest trees are so liable; and two took hold and grew. One especially delights my eyes by its vigor. Can't quite hope to see it bloom the coming season; but next year I hope it will solve one corner of the problem for us. I fear, however, that the variation will not be very great, from the fact that my trees came from a mountain region, which may not after all be much more forward than Northern Ohio. I have heard since that there are lindens in Texas (called wahoo in some places there), and this is what I am trying to get at in the present article. *Will not some public spirited comrade in Texas send a few to Mr. Root's honey-plantation?* Texas has a very early and very extreme climate; and if lindens from there will endure northern winters, we may hope for as much difference in the time of bloom as there is between New York and Stockholm.

It is surprising to see how much the linden changes the time of its bloom in response to a little change in atmospheric conditions. The same tree will vary nearly a whole month in different years. And where there is a hilly country that has lindens growing both in the valleys and on the hill-tops, there the happy bee-keeper has a chance to " scoop " all the rest of us, when it comes to the game of brag; for the trees on the hills bloom long after the others, and give him a double linden harvest.

The linden will probably prove an easy tree to develop ornamental varieties from. On page 318 of last year's *A. B. J.* one is mentioned that has a crook in the petiole, or leaf-stalk, to throw the silvery side of the leaf into view. It would probably be easy to get a variety, with coral-red petioles and leaf-veins, if it were worth while — at least it runs in my head that I have seen trees that showed considerable red. This adaptability to ornamental purposes is likely to count something in favor of the honey-supply by and by.

Our country is rapidly approaching the point where timber will have to be planted and raised as a crop. The linden has one great advantage for this purpose, that it will be well to keep in mind. Other trees, when they are cut down, " die and make no sign." A basswood stump hasn't the slightest idea of dying. Protect it one year from the greedy browsing of stock, and it will throw up a whole brood of wonderfully thrifty saplings. These can be cut one at a time, and shoots trained up in their places. Don't you see that a basswood-timber plantation, once well under way, would yield a regular yearly harvest for an indefinite period? In forests where basswoods grow naturally, these stools of six or eight trunks of all sizes are often seen; so there is no doubt of the feasibility of getting them started under cultivation. Such young and quickly grown trunks make the grandest kind of sections; and that demand supplied, they make splendid lath.

WINTERING REPORT.

Packed for winter 117 colonies in my regular way, and 13 more in various experimental ways. Of the former lot I believe all at this date are holding the fort. More bees come out and die on the snow than one likes to see; but I hope it will not amount to any thing serious. Of the 13 experimentals, 9 are not get-at-able, and I do not know their condition; 3 are O.K.; one got *drowned* by the pit it was in filling with water during the flood of rain and slush with which February opened out. E. E. HASTY.

Richards, Ohio, Feb. 15, 1883.

I am with you, friend Hasty, on the basswood-development project, and my 4000 are coming into bloom now more and more every year. In our forests here we can find, occasionally, blossoms that are as much as a month apart in their time of blooming. In our back volumes we have given proof that they may be raised from cuttings, and it is no great task to get a basswood orchard to blooming.

ANSWERS TO SOME QUESTIONS.

ABOUT WIRE-CLOTH WINDOWS TO THE HONEY-HOUSE.

ON page 70, in your comments to A. A. Fradenburg, you ask those who have tested Doolittle's idea on screens for windows to report. I was greatly puzzled to find out some plan of getting the bees out of sections just taken off the hive, and still not letting the bees from the outside get at the sections. I tried all the different plans I could think of, but only to fail, as my bees were something like yours — educated to rob at every opportunity, and almost without opportunity. Well, I read friend D.'s plan in the *A. B. J.*, and so, thinks I, I will try it; but I am sure my bees will find the way in. So I made a large box with a tight-fitting cover, and cut a hole about 2 ft. square in the front, and covered it with wire cloth, letting it run up about 6 in. higher than the hole, and kept it off about ⅜ in. from the front of box; having some sections ready to come off, I placed them in the box without smoking out the bees from the sections. I then took a seat in front of the box, to see how soon the bees would find their way in. In a few moments the bees inside began to come out, and the bees outside tried to get in, but instead of going to the top to get in, they seemed to spend their whole energy trying to get through the wire cloth. I used this all the season (and even after the honey-flow was over, and robbing was the order of the day) with entire satisfaction, for I could leave the honey then as long as I liked, and not a bee would touch it.

HONEY-BOARDS TO KEEP THE QUEEN BELOW.

I think friend Heddon uses rather strong language on p. 74 about the queen-excluding honey-boards. I think he makes out that one of the strong points of his honey-board is, that it keeps the queen from going up into the surplus-honey apartment; but they will go up in spite of his honey-board; but I never had any trouble with the perforated zinc.

ONE-POUND SECTIONS STILL AHEAD.

On page 77, G. J. Flansburg asks those who have used the 1 and 2 lb. sections to stand up and tell the difference in regard to the amount of honey stored in them. I used both 1 and 2 lb. sections last season, and I am satisfied I got a fifth more honey from those using the 2-lb. box; yet I sold all of the 1-lb. boxes before I sold a fifth of the 2-lb.; and one of our grocerymen told me he would give me 25 cts. per lb. for 1-lb. boxes rather than 15 cts. for the 2-lb.; so I have concluded to run all one-pound boxes next year. The ½-lb. section is too small for me.

JOHN MYERS.

Stratford, Ont., Can., Jan. 15, 1883.

SOME VALUABLE FACTS FROM AN OLD BEE-KEEPER.

WHY SWARMS SOMETIMES LEAVE WITHOUT CLUSTERING.

I LEARNED, years ago, that if the bees had room so that the whole of them could rush out they would sometimes start for parts unknown without clustering. I think the reason that they almost always alight is, that they are tired of flying, being loaded with honey, and want a rest before starting for their new home; always supposing that they have it picked out before leaving the hive.

CLUSTERING OUT; HOW TO PREVENT.

In the spring, when it gets about 80° in the shade, as I go around just at dark I find the strongest want more air, and I take off the oil cloth and put on a burlap grain-sack, double; one thickness lets air through too freely. One bag will last all summer. At first I leave the cover nearly down to the cloth; and as it gets warmer I raise it higher; the warmest days I raise it about 4 inches, and by so doing I hardly ever have any bees hang out. The entrance is left only large enough to give them working room. When a swarm starts out they have to take time — those first out flying around 15 or 20 feet above the hives; by the time the most of them are out, those *first* out, being heavy with honey, are tired, and, beginning to cluster, draw the others with them. By pursuing this course I have not lost a swarm to my knowledge the last two seasons.

Toward the last of swarming I devised a plan whereby I think we can almost always catch our swarms. As I said above, the bees coming out slowly fly around 15 or 20 feet above the hives, for some time. We all know how strongly they are attracted to and cluster around any queen, so I thought if I could get a caged queen up where they were flying, I could get the swarm to alight around her.

As soon as a swarm begins to come out we get a frame of open brood and honey, knowing beforehand the hive it is in, hanging on the side a caged queen with 30 or 40 of her bees, that we have taken from a hive to which we want to give a better one. We keep her as long as she lives, and then cage another poor one; we now hoist our frame among the flying bees, and catch them.

BEE BALM, FOR MAKING SWARMS ALIGHT.

Some time ago a rather large story-telling acquaintance told me that, when a young man, he hived 23 swarms from the same bush that he had sprinkled with a decoction of bee balm. I did not give it much attention at the time, on account of the source that it came from; but a *reliable* neighbor, who is about 60, told me last spring that, when he was about 15, he helped his father hive bees on a bush or fence-corner, or wherever he would sprinkle a tea made of bee balm and salt. Can't some of our older friends give us some light on the subject?

MELTING CANDIED HONEY.

In heating honey to make it liquid, I can not agree with some of our friends who say, "Heat it nearly to the boiling-point," which will spoil the color and flavor of our honey. My tank for heating honey holds 4 five-gallon cans, and I take all day to heat it, keeping the water about 130°, never over 140. A pail of chips, using a few at a time, will do a batch. Our honey is very sensitive, and a little *too* much heat spoils it. I ought to know, for I have heated up tons of it, as our honey almost all candies in poor or moderate seasons. In good seasons our best honey does not candy, generally. I have some 1876 honey, perfectly clear. In 8 years we have had but two good seasons.

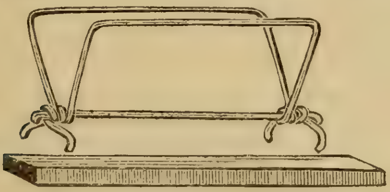
S. S. BUTLER, M. D., 90, 130.

Los Gatos, Cal., Feb. 6, 1883.

I believe, friend B., you are right about large entrances, although it never occurred to me before. I have often stood by swarms going out, and observed the apparent impatience of those out first, when the entrance was so small as to make it take considerable time for all to get out, and I have even seen them come back and try to go in again, where the entrance was *very* small. I now recall to mind a swarm that went right out and off, and it had quite a large entrance. Let us bear this in mind, friends, and see if it is not a new contribution to our stock of bee knowledge. I know that we can, to a great extent at least, prevent clustering by shade and ventilation; and I know, too, that powerful colonies will often remain idle in the very height of the honey-flow, if the hive is too close, and standing in the sun.—The idea of a queen, or frame of brood, or both, to collect the bees in the air, is old, and I believe is usually a success. A queen, with a few bees in a corn-popper, tied on a pole, has been used quite successfully by one of our lady writers.—After one swarm has occupied a certain bush or limb, another is quite apt to; and after several have alighted on it, it is pretty safe to say all the rest will. I can readily believe that any strong scent, resembling the smell of bees, would attract the straggling bees of a swarm, and thus cause the whole swarm to cluster there.

TONGS FOR HOLDING FRAMES.

I SEND inclosed a small model for tongs for taking frames from the hive. I used them last summer with much satisfaction. They enable a person to take a frame from the hive, and turn it in any direction. They take a firm hold on the frame; and the heavier the frame, the better it holds.



FRIEND VREDENBURGH'S FRAME-TONGS.

They can be made in a few minutes from ordinary telegraph wire. The point that clasps the frame ought to be as short as possible. It is my own invention, and I offer it to you free gratis, in return for the many useful hints I have received from GLEANINGS. J. L. VREDENBURG.

Austin, Texas, Jan. 31, 1883.

Similar devices have been several times suggested, but I believe the above is rather the simplest of them all. It is quite ingenious, and no doubt would prove a help to one who had once got used to it. I do not know that I ever felt as if I would like one of them, unless it was when I had a colony of vicious hybrids, with the unpleasant fashion of crawling off the comb on to one's fingers, whenever you tried to take hold of it at any point. With such bees, I have sometimes thought I should like tongs; but as a rule, I fear I should find them "too much machinery," and let them get lost. However, we tender our thanks to you, friend V., for the kind and generous spirit you show in your concluding remarks.

THE RESULTS OF ONE WOMAN'S BEE-KEEPING.

39,000 LBS. OF HONEY IN ONE SEASON.

DEAR brother in Christ: I feel constrained to address you by the above name, although I have never seen you; but your wise counsel in GLEANINGS, and earnestness in Christ's work, make you seem as a brother in his work, the work of life, which should always be first and uppermost in our lives. I believe if we love our heavenly Father as we ought, and as it is our privilege to do, that all we have and all we are will be consecrated to his work, insomuch that we will feel that we are stewards of the Lord: that our property all belongs to him; not even that he has made us a present of it, but that it still belongs to him, and he desires us to make the most of it, to use it in such a way as to be of the greatest benefit to ourselves and to mankind.

More than ever before have we (Mr. Axtell and myself) felt thus the past year, and we have also felt that our faithful God had verified his promise, that if we bring all our tithes into the storehouse he would pour us out such a blessing we should not have room to receive it. We have been trying for years to bring all the tithes into the storehouse, and he has blessed us; but this year more than usual, for we scarcely know where to put so much honey. I don't know how it is about those who did not bring in the tithes, and who received the blessing too, for it seemed there were some such; but that none the less weakens God's promise, and the fulfillment thereof to us.

In the spring we started with 218 colonies of bees; 128 wintered in the cellar, all taken out alive; that is, we lost none in wintering in cellar, but found from 2 to 4 queenless, and nearly all in good to fair condition. The remaining 90 wintered out of doors at Timber Apiary; two or three died; about two were queenless, the rest very strong. This was the condition of them the first time we opened the hives in the spring. The first of April the weather was very warm for that time of the year, and the bees consumed their stores fast, and also increased in numbers rapidly.

In May we had cool weather during most of the month, so that the bees gathered but little from fruit-bloom, and seemed not to increase in numbers; in fact, some colonies seemed to be growing weaker each day, and their stores running close.

ADVANTAGE OF PLENTY OF STORES IN THE SPRING.

Probably so little honey in the hive was one reason of their dwindling; for those colonies that had an abundance seemed to improve, so that those that were taken out of cellar last, and were rather weak when first set out, had consequently not used up their stores, and were in as good (if not better) condition when clover harvest came than those first set out in the spring, and began brood-rearing so early that they became scarce of honey.

ADVANTAGE OF SPRING FEEDING.

All our bees that are good colonies were wintered on 7 brood-combs, or more, according to strength of colony. All seemed to have plenty of honey to carry them through, except those wintered outdoors, and those first set out of cellar. We gave to each of these colonies two brood-combs more filled with honey, or as full as brood-combs are generally filled — some full, and others not full. Quinby frames; outside measure, 11½ x 19½. Guessing at the honey fed, we called it 1500 lbs. We also fed 1½ barrels of grape sugar (corn sugar, more properly). The colonies kept in the cellar the longest, some of them got one comb and some got some of the grape sugar, so that all were fed some; but I think it would have paid us largely if we had fed half as much more; but we kept hoping they would help themselves; and as it was a big bother, and one of the most unpleasant tasks that a bee-keeper has to do, especially if one has to buy sugar to do so, that one would almost rather lose a few colonies than feed sugar in the spring, as people are so prejudiced against sugared honey. We don't intentionally let any die, but we sometimes let them run very close.

The first week in June found bees doing their best; never saw bees pour in the honey as they did; one week perfectly idle; next week a flood of honey as it were. About the last week in May we had united all our colonies that we could not call strong. We followed the Doolittle plan, as given last spring.

By the way, we have more than one plan we follow which we call the Doolittle plan, for we find his advice generally good and safe. But we concluded that it is generally the safest plan to cage the queen, as we lost quite a number of queens in wintering — several at least. Probably some would have died if let alone; but as we had more bees than we in our poor health knew how to care for, we did not care very much.

When the swarming began we had 20 or 30 two and three frame nuclei, made so by taking away all their brood and bees except what went back, and giving them to other colonies, leaving about 180, or nearly that, of good colonies. I doubt if there were more than 170 good strong colonies by the time we finished all uniting, as we were severe on uniting, as we determined on having strong colonies, and desired no increase all summer, as we had all the bees we wished. We kept no record of numbers united back, as both of us were out of health, and our help was insufficient and inexperienced.

Finished putting on surplus frames the 10th of June; the 13th we had two swarms; from that time until the 10th of September, our last swarm (last honey gathered Sept. 16th), we had swarming every day almost — from one to thirty per day, except about the last of July.

The first swarms we put into hives by themselves, helping them all we dared to, and not have them swarm again. The old stocks we gave more combs of brood, often filling up the hive full with 10 to 12 combs of brood, and a queen-cell just ready to hatch, or one of the best we had. By the time the young queen was ready to lay, the hive was boiling over with bees, and would often swarm when she flew out, especially if any thing had destroyed the first young queen, and they had to raise another. By the above method the bees were almost sure to swarm, but just as sure to gather honey. The swarms were always large, and ready to go into boxes. Every swarm, except strong first swarms, were put back into the parent hive, and also late first swarms were put back.

We had about 400 swarms, but united back until we had, at the close of the swarming season, only about 298 colonies all together. Increased by swarming, about 80. Honey gathered, 39,000 lbs. or more; about 1900 or 2000 extracted, and the rest comb honey, and as nice honey as we ever had.

A GOOD WORD FOR THE COMMISSION MEN.

Thirty thousand pounds was shipped to Chicago, and is being sold by five commission men. We are not certain but that it would have been better to have let one man handle it all instead of dividing it to many; for when a person came to buy he would go first to one commission man and then to another, and get his price on a particular brand, and buy where he could get it the cheapest. There is one advantage, however, in leaving it with a number of men, for if one was dishonest, or failed, we should not lose all; but we are each year learning to have more confidence in our commission men; in fact, more confidence in everybody, especially business men and railroad companies.

HOW TO MARKET HONEY.

We shipped one lot of our honey to Chicago just as early in the fall as we could get it ready, at so much per pound (about 7000 lbs.), not knowing we could have chartered a car and saved $10.00 on the shipment. Next time we chartered a car, and then the honey is allowed to remain in it until the commission men take it out themselves, which they do with their own light spring express wagons. We can send a carload then, if one wishes to, for same price. We prefer to ship by freight instead of express, even small lots. Since very cold weather came, we sent two boxes to Nebraska. The weather was rather moderate while on the cars, and the honey was received all right, not broken badly, and more has been ordered. Our agent takes great pains that it shall be safely sent.

REPORTING CHICAGO MARKETS.

I have sometimes wondered that the Chicago market was withheld on comb honey, in GLEANINGS, when the truth is, there are tons and tons of it in the city, selling at a paying price too. Mr. Axtell was there week before last, and none of our honey had sold for less than 15 and 16 cts. in large lots, and 17 and 18 in small lots, crates generally to be returned.

GIVING AWAY THE CRATES WITH THE HONEY.

We made our crates so nice that we thought we could not lose them; but in that we think we made a mistake. The crate ought to go with the honey, to be of no more care to the commission men. One of the men who handle our honey, R. A. Burnett, one who handles as much, or more, than any man in Chicago, said he preferred the crates to be of unpainted, fresh new pine; but the others all said paint them, as it gives the retail merchant a better chance for selling. If one ships all his honey to one man he will not be likely to buy so much of another; but if he has a dozen lots from so many different men, his customer has a chance to reject yours, if it is not quite as attractive as others. Honey ought to be graded with the greatest of care, and not one dark or rough comb should be put into a crate with honey represented as nice. If you do, they will remember it, and shun your honey next time. But it is well to have a second grade, *marked* as second, as the commission men say they often have some men who want such, if they can get it cheaper.

NO SEPARATORS.

We took great pains in cleaning our section frames, and in putting them in the crates so the honey would not touch, as we used *no separators*. I don't know how we could have kept the bees in the hive with separators this year.

PUTTING THE HONEY IN THE CRATES.

And then we put in two thicknesses or more of paper in the bottom of the crate, and let the paper stand up a little around, so if any honey got to leaking it could not run out of the crate, which is a very important thing to do, unless the crate is made so tight as to hold honey, and each comb was perfectly sealed into the section all around, and no broken cells. In handling sections to clean the frames, our girls would cut cells occasionally, which I also found it hard to help; but I found it paid to have clean sections. Some of our sections had been on the hive the year before, and a few two years; but on account of the nice comb in them for starters we used them, and white honey was put in them; but the frames needed thorough scraping before they were fit for market.

For our town market I don't know but that the honey sold just as well if not so carefully cleaned, though we held ours at 18 cts., and the box-hive men got only 15, both in the same store. We sold considerable, but in small lots. If customers wanted 10 lbs. or so, or wanted a whole box, they took the 15-cent honey, as it was just as nice as ours.

Much honey has been sold in our town at 12 and 15 cts., while ours has been held at 18 cts. On our first grade, we gave our grocers 2 cts. per lb. for selling, while it costs less than that to ship to Chicago — freight, commission, and all. Five per cent commission is what we pay in Chicago. Mr. Oatman, of Dundee, Ill., has the name in Chicago of being a first-class honey-producer; also Mr. Heddon.

You will see by figuring, that our bees gave us over 200 lbs. per colony; 216, not counting in the 2-frame nuclei — an almost incredible amount.

UNITING BEES TO NUCLEI.

I forgot to say in the right place, that the stocks of the first swarms were given to the 2-frame nuclei. We found that bees would receive other bees better by brushing them down in front of the hive, and letting them crawl in slowly. A few times have we had apparently every bee killed when we attempted to build up a weak swarm by pouring in other bees among them from the top. One such case occurred this summer, and during a good honey harvest too. In 15 minutes I opened the hives, and the strongest smell of poison from the bees told us the work was done. The colonies, I thought, were about equal in strength; and as there were about as many bees thrown out on the front board, I concluded that the work of destruction was done by the bees in the hive.

BEE-KEEPING FOR WOMEN.

I think bee work especially fitted for ladies, notwithstanding the testimony of some others. Because I had been an invalid for 20 years, confined to my bed three-fourths of the time, I thought there would be no opportunity for me to live out of doors; but as I had learned to do a great deal of work on my bed, I thought I could be of as much help to my husband as in any other way, and perhaps more; consequently I studied and read every book and article I could get hold of on bees, not only by reading it once, but many times over. My general health began to improve from that time to the present, although I am obliged to keep my bed, or lounge, rather, about half of the time in late winter and spring. Yet my general health is good, and I can always be busy. This fall and winter, so long as I could be up each day I was packing and weighing honey, and having a general oversight of my work; then when I could not be up any longer, I have had placed beside my lounge a pile of honey in sections, the worst frames, and with a sharp pocket-knife, and a sharp-pointed case-knife, I scraped and whittled those frames until they looked like new ones, which added to the value of the honey several cents. Of course, the bulk of our honey was in nice new clean sections. I am troubled with catarrh in the head in winter; but when working over the hot and boiling water, when trying out beeswax, I always find relief — I suppose from inhaling the wax-sweetened water.

MRS. S. J. AXTELL.

Roseville, Warren Co., Ill., Jan. 15, 1883.

(Concluded next month.)

Many thanks, sister. When I first saw your letter, and found there were 50 pages of it, I felt a little troubled; but since I see how full it is of good and useful hints, I have changed my mind. My friends, are there any among you who are discouraged, and thinking of giving up? Just read these little extracts which I take from Mrs. Axtell's first letter for GLEANINGS, printed in our Feb. No., 1874. Here are the extracts:

Many have been the times this summer that both husband and I have wished that we had let bees alone; but there is no backing out now, without quite a loss, which we could ill afford. * * * One of the swarms filled the hive of 2000 cubic inches (box hive), clear to the bottom, so we thought we would do as some of our neighbors did, — pry off the top and take out some of the honey. We inquired of half a dozen or more of our neighbor bee-keepers if it would do any harm: they could not see that it would. So one hot day in August or September we went to work; but such a muss as we got into—bees, honey, and all, squashed down together! It set us thinking if there was not a better way. * * * *

We had a fine prospect for buckwheat harvest, but an early frost killed it: the bees had scarcely any stores in their hives, and we began to feed near the first of July (just enough to keep them) from ¼ to ½ teacup daily, in the evening; and as soon as the frost killed the flowers we fed for winter stores: in all, we fed about three barrels ($90.00 worth) of A sugar made into a syrup.

Now keeping this in mind, just look over the report in this number, of *thirty-nine thousand pounds of honey.* Why! it's away ahead of the gold-mines of California, for it has brought health and happiness, and the gold often brought only trouble. The money from the bees has also — at least a part of it, thank God — helped to carry "peace on earth and good will to men" in many places where it was most needed. Praise God, from whom all blessings flow.

FRIEND CHRISTIE'S REPORT.

ALSO A SHORT LESSON FOR "BLASTED HOPERS."

INDIRECTLY you ask me for report of honey crop — "your great honey crop" you style it. I have no *great crop* to report this year. I had a very cold wet spring and early summer. In June I had to resort to feeding, and kept it up until July. July 2d I removed feeders, and bees became self-sustaining.

We had a light basswood crop; but during August there was an unusual honey-flow for that month. Owing to absence of rain during the greater part of August and September, the goldenrod crop was light.

In May last I had 252 swarms at Smithland and Oto, points on the Little Sioux River, about 6 miles distant from each other. I procured from these about 40,000 lbs. of extracted honey, and put 385 swarms into winter quarters, first feeding them about 600 lbs. of sugar, in order to give them sufficient stores for the winter.

Not being in the habit of reporting my crop to the journals, and not thinking of doing so, I have not been particular to count, weigh, and keep *exact* track of operations; hence the figures I give are *estimates* rather than *exact* figures; but they will fall within the limits of what my little workers have done for me.

I have at different times sold bees on time, taking my pay in honey when bees have gathered it. About the first of August last, a young man to whom I had sold some bees in this way, and who had them located on the Missouri-River bottom, about 30 miles from here (Smithland), became discouraged, and sent a note by mail, saying, "You had better come over and look after your bees, as I leave by to-day's train." He had been gone a week before I received his note and got over there. I found bees in 65 hives, many of them strong, and about ready to swarm; others *very* weak, having evidently cast swarms which had hunted themselves homes; four were queenless, and one of these well filled with fertile-worker brood; no honey to extract, but some surplus coming in. I went over them, equalizing as to strength, furnishing hatching queens to the queenless, and giving additional room and surplus combs to those requiring same. Two weeks more the apiary was entirely alone; then I had a hand there to the close of the season. In the interim a few swarms had evidently gone to the woods. I got over 8000 lbs. of extracted honey; then I fed about 400 lbs. of sugar, to make full winter stores. No increase.

As my orders to you for labels would indicate, I am putting up more honey than this mentioned, for the market; but the excess comes from earnings of bees that I have heretofore sold, as indicated above; hence your idea of a "great crop." A. CHRISTIE.

Smithland, Iowa, Jan. 23, 1883.

And I stick to it still, friend C., that it *is* a great crop, for I don't see that it matters much whether one does all the work with his own hands, or has it done under his own eyes, or sets somebody else to work in the novel manner you describe above. Perhaps I should say to our readers, that we have printed over $200 worth of labels this season for friend Christie.

ROCKY-MOUNTAIN BEE BUSINESS.

ALSO SOMETHING ABOUT THE FIGWORT IN COLORADO.

NOW that I am having a sick spell you must let me "holler" my whole respects to the Simpson honey-plant. We have acres of it here in the wild state. The acres are all long, narrow, and very crooked; of that shape, because they have to hug the streams pretty closely in their narrow valleys, which are hemmed in on both sides by mountains that are — I was going to say how many feet high, but those fellows that are hinting about honest bee-keepers telling "honey fibs" might think it a thousand-foot lie instead of a mountain that height; but I will say that the tops (of the mountains, not lies) are often above the clouds.

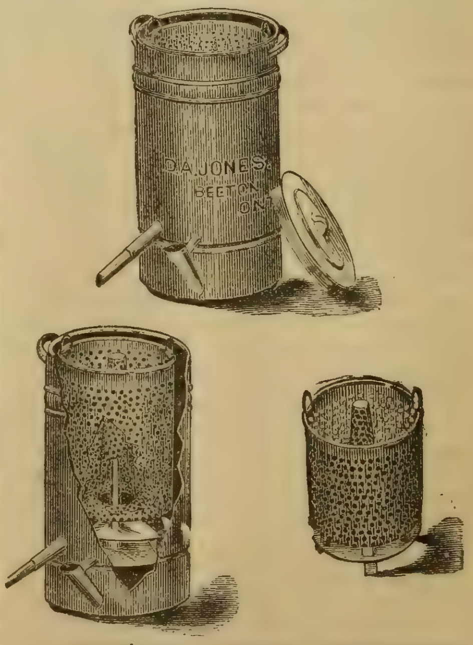
There seems to be two kinds of Simpson plant here. One has a red stalk, the other a green stalk, or it looks as though it might be of the red variety after a spell of colic. It is something of a pest with us, as the more you try to plow it out, "the more it sticks the faster," as nearly every piece will grow if it has water; and without moisture it is no go for honey. It commenced to bloom last season about the center of May; but our dear little sting-bugs would not even smile on it for two months. I do not think it holds honey by the "schooner" or "boot-leg" full, as some would like to have us swallow. It also has a yellow spider that goes with it that I don't like. The animal, reptile, or whatever it is, has a body about the size of a pea; the shoulders, legs, head, and vest-pocket, if it has one, are all in a cluster, and stuck on one side of its body — front side I suppose. The spider plants himself or herself to roost right over the lip of the flower, just as a man's nose stands guard over his mouth, and he puts on the look of patience and determination that the boy must have worn when digging the woodchuck for the preacher's dinner; there he waits until a bee, be it honey or bumble, comes along and sticks her head into that flower; then he just reaches over and grabs the bee by the back of the coat-collar the same as the schoolma'am does the little boys, and holds it until it either strangles, chokes to death, or forgets to breathe. If you would like a pair of these spiders I will try to send you some when in season. If any one else wants them I will have to charge a little more, because they are all tested, and warranted to be four x Italian spiders, as they are yellow all over. H. KNIGHT.

Morrison, Col., Feb. 19, 1883.

AN IMPROVEMENT IN WAX-EXTRACTORS.

ANOTHER FAVOR FROM THE BUSY BRAIN OF OUR FRIEND D. A. JONES.

THE drawings below will make the matter plain, with a little explanation. The plan is not very much different from our Swiss wax-extractor, only that the copper-bottomed steam-generator is a fixture, and that the steam is admitted right into the center of the mass of comb.



D. A. JONES'S IMPROVED WAX-EXTRACTOR.

The can is almost exactly the size of our 10-gallon flour or honey can, only the bottom is copper. About 6 in. up from the bottom, a swage is run in the can, that catches and holds a second bottom, so it may be securely soldered. This second bottom, has a hole in the center, 7½ inches in diameter. Around this hole a tin curb is put, 2½ inches high, with a wire around the top, and this completes the can itself. By reference to the second cut you will see this second bottom, and you will also see that it slopes a little toward the outer sides of the can. This is to carry the wax to the outside, so it may run around and finally be carried out by the long exit pipe. The other funnel-shaped pipe, right by its side, is for pouring in the water that generates the steam.

Well, now, to prevent the wax from dropping down that large hole, into the water, a sloping cover is set over the hole. Three legs keep it from resting right on the curb, that the steam may get out easily, and in the center rises the tube that carries the steam into the center of the wax. Now when we set in the perforated wax-basket, shown in figure 3, we have the whole thing complete. You see this basket has a center of the same perforated zinc, that slips over the tin steam-pipe. The cover to the whole is an ordinary tin sloping cover. Here is what friend Jones writes in regard to the machine:—

I send you electros of wax-extractor. They are, as I think, the nearest to what we want of any thing yet got up, and are patented in Canada. I think that you can confer no greater favor on the people in the U. S. than to make them. Just place the one I send you alongside of four "Weiss" extractors, and see if mine doesn't beat them all. You can make the perforated basket of tin instead of zinc, if you choose. My retail price is $4.50. You can do them, I guess, at the same, and make a profit.

D. A. JONES.

Beeton, Ont., Canada, Feb. 13, 1883.

Friend J., our people owe you another vote of thanks, if nothing more; and when opportunity offers, we hope to be able to show you we can appreciate your labors, and the free way in which you have given us all the benefit of them. We can furnish the extractor at price named above.

REPORT FROM CANADA.

THE MORAL INFLUENCE OF BEE CULTURE.

IN making reports of progress, etc., from this *wonderful* Canada, your many American readers must be canny in their comparisons, remembering that numerically we can not compare with you. Suppose we can not keep ahead of you in apiarian inventions, *big* honey-yields, etc., we congratulate ourselves on being able to keep on a par with you, yes, in sight of you. Bee-men of this part of the province are, generally, men of some intelligence, and possessed of good solid common sense, and appreciate the rapid (and, in many cases, the leading) advancements by the brethren on that side of the national boundary, and we feel that a very narrow space lies between us. Your prosperity, successes, energies, and failures, affect us very much as they do yourselves. We are also well aware of the fact that there is one feature of the bee business which commends it universally to thoughtful minds, and that is, the moral influence it exerts. The system of bee-keeping appears to be impregnated with a deep moral sense, and is influencing not only those directly connected with it, but the public at large. The finger is being pointed at the fabric as a whole, and "behold the fruits of righteousness" is uttered by not a few. We in Canada feel grateful to the great Giver that you, friend GLEANINGS, are, we trust, stamped with the divine image. Thus may it ever be; and amid the ruins of human nature may rays of light from the Sun of righteousness radiate from your pages, is our prayer.

I, being so very busy and crowded with work, have not got the material which I had collected for a report to GLEANINGS ready before this. In fact, I have discovered that procrastination is something more than a "thief of time." He has stolen some of the facts and ideas from my memory. I will give you what I have left, and beg forgiveness for that which was intrusted to my keeping.

The bee business in this part of Ontario has been far from giving a profitable margin the past season. In fact, those who depend upon bees for a living will have to draw on past profits. Considering the backward, wet, cold spring, and poor honey season, we have done quite well, and are, at this time, encouraged to hope for better results the coming season. Bees have gone into winter quarters in good or perhaps average condition. The winter so far has been very steady and cold; but the season up to date has been favorable. Considerable fears were at one time entertained as to successful wintering, on account of poor honey, but the dry weather toward the close of harvest enabled bees to ripen their honey and get it into winter shape, so that, with the exception of short stores, bees are in a fair way to winter, with a small percentage of fatality, and good "springing" will bring through a goodly number of stocks in all well-conducted apiaries. Those put up in the old-fashioned way do not promise so well.

Putting our production, etc., in a statistical shape will run somewhat thus: I do not give my own, but that of a number of apiaries in this section, taken as they come, equal to about 1000 stocks. Surplus, 20 lbs. per original stock. Increase, 50 per cent. Prices averaged 15 cts. per lb., wholesale. Some few apiaries averaged about $5.00 income per original stock, in honey; and, if wintering successfully, another $5 00 from increase. This is not a large yield, yet it is better than none. Some have not covered expenses, and, if wintering unfavorably, will be losers.

In respect to modes of wintering, out of the 1000 about 600 are in cellars, 300 in bee-houses, 40 in chaff hives, and 60 out of doors in old boxes. About 300 of the above had no honey after basswood; the remaining 700 had access to buckwheat. Mine gathered an average of 5 lbs. of goldenrod honey to the colony, and about 5 lbs. of buckwheat, all ripened and capped. This, with an average of 17 lbs. of basswood honey, forms their winter stores. All are doing well up to date; no fly yet to those outside. Lowest temperature in this section, 17° below zero. Snow has covered the ground so that we have had continuous sleighing since Nov. 20th.

WHAT KILLED THEM?

Here is an observation: Bees out the night of the November electric storm seem to have suffered severely. I put 48 colonies into cellar on the 18th, after the storm. They immediately threw out a quart of dead bees. They had a good fly on the 12th. Did the electric storm have any thing to do with such fatality, or did the cold? It fell to 10° below zero. Or did the dampness, the air being saturated, do the bad deed? or was it the combination — cold, dampness, and electricity? Perhaps science has something to say. The bees having a good fly but six days previous to going into cellar would not, under ordinary circumstances, accumulate so many dead at that time of year.

HOW MANY BEES OUGHT TO BE FOUND ON THE CELLAR BOTTOM?

"A B C'ers" are curious to know if there ought to be *any* dead bees in the cellar. I always have a few. I will go and see how many I can get out of the cellar with 48 colonies. * * * I took a goose-wing and dust-pan and crawled in, in the dark, without in any way touching a hive, and got 6 quarts. Do others have any? J. E. FRITH.

Princeton, Ont., Can., Feb. 9, 1883.

Thanks for your kind words, friend F. I do think the care of bees tends to elevate the soul, and to help us to see God; and I do think, too, that our bee-men are, as a rule, if any thing, a little in advance in intelligence of the average run of people.—I do not think the electricity had any thing to do with the bees dying, and perhaps not the dampness; but the sudden fall to below zero found many bees outside the cluster, and this was what killed them.—Six quarts of bees from 48 colonies would be quite moderate, I should think, from Nov. 18th to Feb. 12th. Occasionally a colony of bees is wintered without hardly a bee being found that has died of old age or other causes; but I believe such cases are rather the exception. Perhaps if they went into winter with no very old bees, and their stores were just right, and protection just right, they might come through with no dead bees, comparatively, on the bottom-boards.

THE CYPRIAN BEE.

WHAT FRIEND MALONE THINKS OF THEM.

I BEGAN bee-keeping in the spring of 1880 with 6 stands of black bees in box hives; in April I bought a 3-frame nucleus with Italian queen; in May I transferred to frame hives, and saved the black queen. In August I had raised Italian queens for all young swarms. The year 1880 was a poor honey season, the blacks were so far behind the Italians that I killed all black queens and gave Italians in place.

In 1881 I concluded to try Cyprians. I got a tested queen, a daughter from the queen you got of Hayhurst. She was good, and soon filled the hive full of bees, and they were the "contrariest" bees you ever saw; not so bad to sting, but to boil out all over the hive, and out at the entrance. Whenever I commenced to smoke them, the more smoke they got, the worse they would boil over.

About this time I saw Frank Benton's plan of handling the Cyps, and haven't had any more trouble. I got the Cyprians to test them alongside of my Italians, and I have done it.

Now, I want it understood that I haven't raised queens for sale, and that I gave an impartial test. I had two Italians and two Cyprians sitting side by side in the spring of 1882. They were as nearly equal as could be, and all young queens. They bred up about the same until July 10, when linden opened. I put 6 combs in each upper story, and then watched closely. When coming in laden, the Cyprians would dart in. A large number of them would alight above the entrance, and some would fly clear in the hive, while the Italians would drop two and three feet from the entrance, and rest long enough to unload. Then I said, "You little Cyps, you surely are not carrying very big loads, are you? I will see." So I threw all the honey out of upper stories, and then extracted regularly every two days through linden bloom; and every time, I got about one-sixth more honey from the Cyprians.

Friend Jones said that Cyprians could fly faster, and carry heavier loads than Italians. I am not in the habit of believing every thing I read; but this I will admit, after testing it. This is not all. I can extract, or can get the bees off three combs of the Cyprians while I can get two from Italians.

When I lift a comb of bees and honey from my Cyprians, and give it a shake, three-fourths of the bees on the comb will fly off and go in the hive; and then give the remainder a brush or two with the turkey-wing, and the comb is ready for the extractor, while the Italians are somewhat like the old darkey preacher's opossum. The worst colony that I had last year to sting was a light Italian that I raised before I had any Cyprians.

Now friend Heddon can have the dark Italians, and Doolittle can have his strain, and I will take a little Cyprian in mine.

If you want pretty bees, I suppose they are the albinos; but just get a Cyprian queen mated with a black drone. Try one, friend Root, and see. They have the white rings. The rings on the black bees are plainer than on the Italians. They are the largest bee I ever saw.

I think my best yield of honey last season was due to the cross between the Cyprians and Italians. I am going to test them further, but will have to get pure queens from both races. Can you furnish imported Cyprians, and at what price? Will some brother who has pure Cyprian queens that he doesn't want, please let me know? I don't care if they are cross. I can soon cook it out of them.

Bees are wintering well. They had two flights in January, and two this month. I haven't lost any yet. WM. MALONE.

Oakley, Ia., Feb. 23, 1883.

With the conflicting reports and opinions we are having on the matter, I confess myself unable to decide whether a cross with either Cyprians or Holy-Lands is in the end going to give us more honey or not; but I feel pretty sure they are not inferior, notwithstanding friend Foster's report on page 124. The Holy-Lands are surely a boon for getting queen-cells.

A BUILDING FOR APIARIAN EXHIBITS AT COLUMBUS, OHIO.

OHIO WAKING UP.

THE Ohio State Bee-Keepers' Association, held in Columbus, Ohio, Jan. 9, 1883, did an excellent thing in presenting the following petition: —

To the Honorable Directors of the Ohio State Board of Agriculture:—

Gentlemen,—We, the committee appointed by the Ohio State Bee-Keepers' Association, in convention assembled in Columbus, O., Jan. 9 and 10, 1883, to represent to your honorable body the interest in apiculture and demand for our productions, urgently request that you erect, upon the Ohio State Fair Grounds, a suitable building, with about one-fourth acre inclosed ground attached, in which to exhibit bees and apiarian productions. Plan and approximate specifications herewith attached for Apiarian Hall. We believe the size of this hall, 25 x 50 feet, to be sufficient for our present use, with the space left at one end for extension of hall, if our interests in the future should require it.

SAMUEL D. RIEGEL, } *Com.*
DANIEL SPEAR, }

Now let other States take up the matter, and we shall soon all be moving into line.

SWARMING BY MOONLIGHT.

A "SET-BACK" ON THE IDEA, BY OUR GOOD FRIEND PETERS.

IN your Jan. issue I notice an article on "Swarming by Moonlight," which might not have attracted more than a passing thought had it not been for the indorsement of Prof. Cook, the weight of whose authority is acknowledged by every American apiculturist, so far as I know. I have once or twice seen in your journal articles on "Absconding by Moonlight," etc. Now, I had a large swarm to abscond by moonlight (*in a horn*, vulgarly). It happened in this wise: At 4 o'clock P.M. I had a large swarm of Arkansas brown bees to come out. I hived them, and, it being late, I did not put them on their permanent stand, but waited until dark, at which time I proceeded to remove them. I tapped the hive, and *imagined* I heard a buzz, or roaring. Next morning at 9 o'clock I went to inspect my new colony, and saw they were quite still; tapped the hive; none came forth. I took off the cap, and, lo! not a bee was inside. I called to the gardener, and told him that, as the moon was full, the nights being very light, our fine swarm had absconded by moonlight. This amused him very much, and he was inclined to test my credulity by divers questions. At last he exploded into a fit of laughter, and told me I had scarcely left the garden when the bees took wing and went off, he having followed them to the woods. Now, I opine that none of your correspondents were more confident that their bees left by moonlight than I was; and yet the idea was preposterous, as every observer of the habits and instincts of bees must know.

As to Prof. Cook's indorsement of Mr. Moon, I have to say, I knew Mr. Moon; and to his many excellent qualities of head and heart was added a superstitious fondness for the marvelous, and, as a consequence, he was constitutionally disposed to embellish, and no doubt he had seen in the work of Mr. Langstroth a bit of authority for bees gathering honey during a free flow and light nights, which he thought so constantly about that he dreamed he saw bees swarming at night, which was so vivid in his mobile faith that he did not doubt he had seen the simon-pure swarm at night. Prof. Cook touches the subject very delicately, and well he might. I don't think he believes one syllable of it; and I will wager an Arkansas brown colony of bees that you do not. The thing is an absurdity. Bees do not see after night, and nature's laws would be violated.

THE BEST RACE OF HONEY-GATHERERS IN THE WORLD.

Now, friend Root, I believe the hybrid resulting from the Italian and Arkansas brown is the best race of honey-gatherers in the world. My whole stock, although badly set back by the overflow, averaged 280 lbs. of honey, and I left in the supers for winter food, 72 lbs. Now, I will send a two-story Simplicity colony of strong Arkansas brown bees, in good condition, to any man or woman who will convince an *impartial* witness that bees ever do, ever did, or ever will swarm at night. GEO. B. PETERS.

Council Bend, Ark., Jan. 25, 1883.

Many thanks, friend P.; but still I think it will be well for you to go a little gentle on the brethren who think they have seen or heard bees by moonlight. In a recent number some one speaks of having heard a swarm of bees go off when it was too dark to see them. I have often watched to see if I could see any indication of bees working on very warm bright moonlight nights; but although I saw a bee occasionally take wing, I could not be satisfied that he did more than to blunder about in the dark, only to tumble down somewhere to await for the morning. I saw no bees return to their hive. This was before midnight, mind you. Now if you will recollect what I say in the A B C about the spider plant, you will see that I almost come in for that big two-story colony. I can not now recall whether the east was lighted up by the first gray of dawn or not; but this I do know: That the bees were going out of certain hives, and flying off to the spider-plant field, when it was so dark I could not see them when on my hands and knees before the entrance. I heard them buzz, and felt them with my fingers. After they arose in the air they doubtless found it light enough to guide them in the direction of the spider-plant field; and if they didn't strike the honey at once, they got on the plants and crawled about until daylight came to their assistance. They came into the field in droves, when I could not see a bee, but only heard them. By bending down very close to the flowers, I could see dark spots moving about on them. You will observe that this took place when it was cloudy, and very much darker than bright moonlight. Why, then, did they not fly out on such nights before the approach of dawn? This was a puzzle to me. I was up, and watched the most favorable night that offered, but I never found them stirring until close on to morning. But they may have been, mind you, for all that, for it was, as you know, late in the fall, and favorable moonlight nights were scarce. I am not satisfied yet. It seems to me that I surely can train bees to work on the spider plant by moonlight, by raising plants in the greenhouse, that will be in full bloom during the hot nights in August. If I fail I will get friend Fradenburg, see page 70, to teach his bees to rob from his honey-house, by moonlight. I have tried to get bees to rob by moonlight, to some extent, but failed; but I feel sure I can do it. What has become of the friend who was going to light up the basswood-trees by electric light, and steal a march on old Sol? Come on, boys, and let us get friend Peters' big swarm of bees away from him.

A NEW HONEY-PLANT.

POINCIANA PULCHERRIMA.

I MADE a visit to a neighboring florist, and the first thing I took notice of there was a house full of *Poinciana pulcherrima*, a plant of the tropical regions, which is cultivated largely for its beautiful heads of fiery scarlet flowers, which always come in bloom at the holidays. It is not exactly a flower, but a combination of seed-balls the size of small peas, from 15 to 20 of them. They are of a greenish color, with a yellow crack at the top, which opens when ripe, and out of these cracks oozes a drop of nectar the size of a pea. These seed-balls are surrounded by a bract of bright scarlet leaves, which are used as flowers for floral decoration. These bracts measure one foot across. Now I just came to think of it, how nice it would be if bees could store this honey without being interrupted by cold weather outside! This house I saw was 100 ft. long and 20 ft. wide, and the plants about 4 ft. high, and literally covered with these bracts! I tell you, it would do your eyes good to see such a sight, the whole house ablaze with these scarlet bracts. It would be a fine thing to have in bloom when other plants drop off; and as this plant stands drought well, I think it can be got in bloom when other plants dry up. I will try a bed this summer, and report to you how it turns out. Have any that you know of ever tried it? It yields as much as basswood, if not more.

THE CALIFORNIA HONEY STORY.

Inclosed you find a clipping from the *Family Story Paper* of some time ago. Do you think this can be true?

> Bee Rock, the highest butte in Tulare County, Cal., which was seized by bees years and years ago, and has been used as a hive by them ever since, was blasted out last week and three barrelfuls of bees, killed by the explosion, lay dead at and around a comb of honey thirty inches thick, which they had contracted in their den.

Carlstadt, N. J., Jan. 30, 1883. FR. HOLTKE.

But, friend H., are you sure the Poinciana sends out a drop of honey as big as a pea, every year? or is it only an accidental phenomenon? Who can tell us more about it? —Your bee-cave item is only an old story. The newspaper man probably means a comb 30 inches long, instead of *thick*. The 3 barrels of bees were probably so scattered about, they couldn't measure them, and so they *guessed* at it.

CYPRIAN AND HOLY-LAND BEES.

HOW THEY DID FOR ME.

IN the summer of 1881 I bought of H. B. Harrington an untested queen of each kind. As they had been reared in separate apiaries, and proved to be pure, and were very prolific, I thought they would do as fair representatives of their respective races. Last spring their colonies were both in good condition. I could not distinguish the "Cyps" from the Italians in any other way than that they were crosser, and did not store as much honey as the average of my Italians. The Holy-Land queen and bees differed widely from any thing I ever saw, especially in disposition. As they increased rapidly I was obliged to feed in spring, which I did by providing a top story full of comb and honey. About this time I had occasion, for the first time, to shake the bees from a comb. Instead of dropping to the ground, as bees usually do, they "dropped" at me like a charge of buckshot. All their hostile passions seemed to be aroused. I opened fire with the Clark cold-blast, and gave smoke a thorough trial, as I thought, but it seemed to make them worse. After testing their disposition upon several occasions, I decided to run that colony for — honey in the body of the hive.

In June the hive was crowded with bees, and they worked strongly; but, while the Italians were all swarming, and rolling in honey lively, these stored no honey to speak of. Late in July they cast a swarm of about a *quart of bees*. I heard the young queens piping, and as the hive was still full of bees I looked for more swarms, but soon found four or five dead queens at the entrance. About four weeks later they had fertile workers. The combs were about half full of drone brood, some hatching, less honey than I had fed them, and but few bees.

To dispose of the laying workers, I carried the hive off several rods, and put a new one in its place. I tried various ways to get the bees off the combs. I finally succeeded, by carrying the hive into a field of standing corn, taking one comb at a time, shaking the bees behind a hill, and dodging through the corn to escape them. I gave the returning bees at the old stand some clean combs containing eggs, young larvæ, and queen-cells. In one or two days the cells were destroyed, and the combs were again filled with eggs from the workers. It looked as though the bees had *all* gone to laying. My next move was to supersede the old queen in the new swarm, and the "closing scene" was enacted in the evening, "with charity for all, and malice toward none." The morning light found me with only 14 oz. of Holy-Land bees — dead, and strongly scented with brimstone.

While I willingly take the blame for part of the above failure, I want no more Holy-Land bees of that strain. OLIVER FOSTER, 63.

Mt. Vernon, Ia., Jan. 26, 1883.

Although we have had stocks of Holy-Lands that behaved much as yours did, friend F., I am inclined to think you condemn them a little hastily. I do not know that I have found the Holy-Lands harder to manage than Italians; still, I have seen them so they would mind but little about smoke, after they were once out and in the air. If smoked before they have got out and made an attack, I have not found them hard to subdue. One of our heaviest Holy-Land stocks, from an imported queen, were so gentle I always selected them to handle, because they were the best behaved of any in the apiary. Their inveterate habit of having laying workers, about as soon as they are made queenless, it seems to me, *is* an objection. I have also been a little inclined to think they sometimes fail to store honey when Italians do. Yours is a pretty bad report, surely, friend F.; but we want to hear from all, and I am glad you have given it.

THE ABUTILON AS A HONEY-PLANT.

MORE FACTS ABOUT IT.

PLEASE let me tell you what I know of them. In conducting your honey-yielding experiments with abutilon, I think you will find one variety to be superior to all the others. This sort is a white flowering one, called *Boule de niege* (ball of snow), extensively used by florists in the cut-flower trade. This white variety is a very prolific bloomer and compact grower, and is quite distinct from the yellow and striped varieties, which are a gaunt and coarse-growing class, flowering but little, as compared with the masses of bloom produced by the *Boule de neige*.

There is also an old-fashioned white abutilon, which must not be confounded with the one I am speaking of. The nectar produced by this variety of abutilon is plentiful, and, I think, exceeds that of the others in quantity; it is also an immense pollen-producing flower. The yellow one mentioned by Mr. Edmundson may be an exception; but I think Mr. E. will find the white one better, after having given it a trial. The plant in your office has probably become offended, because no one noticed how hard it was trying, and now it has decided to stand on its dignity; or, perhaps, being among so many bee-folks, it has learned all about bee culture, and is aware of the fact that bees gather no honey in winter; hence there is no necessity for secreting any. I trust that it is not in the condition of the geranium I once read of in a comic poem, as comprising part of the baggage belonging to a medical student, which was described as being "stalky, but leafless."

I have held 50 or 60 flowers of the *Boule de niege* in my hand, suspended by their stems; and by giving my arm a swing through the air, the nectar would descend from them like a miniature shower; this was in the winter time, in a greenhouse.

I have seen the bees working on a large plant in the greenhouse during July; this plant was covered with flowers (about 300 of the handsome bells in full bloom). The bees were around the plant in a swarm, all spraying a liquid, I judge, in the act of condensing the nectar.

The *Boule de neige*, when three or four years old, will produce great quantities of flowers, without any intermission, from Jan. 1st until Dec. 31st, if grown under glass, permanently. For outdoor culture, I fear its only merit will be that of a handsome, ornamental, but not useful, plant (looking at it from a honey standpoint). Abutilons are too large a species of plant to be grown with profit for honey. Where would you put them in the winter time? Surely not in chaff hives. F. HAHMAN, JR.

Philadelphia, Pa., Jan. 26, 1883.

You see, friends, there are plants that yield honey enormously, were we only in possession of the facts in regard to them, and this sight of a single plant keeping almost a swarm of bees busy, right in the summer time, just when we want it, is a fact worthy of record. Any plant that bears honey in such quantities that it may be shaken out, is worthy of investigation. Who can tell us more about it?

SOME INTERESTING EXPERIMENTS IN WAX.

FRIEND HATCH'S "WAX-WORKS."

IN the days before comb foundation was known it did not matter much whether wax was pure or not, for it was mostly used for candle making; and if there was tallow or a little rosin in it, no great harm was done. But nowadays, when nearly all the wax is given back to the bees in the form of foundation, it is of first importance that the article should be of the purest possible make; for these delicate chemists will not only detect and object to a small per cent of rosin or tallow, but show no scruples of conscience in tearing out and destroying any thing objectionable; not only wasting their precious time, and causing us much anxiety, but absolute loss.

Having the foregoing facts in view, I have, during the past season, conducted a number of experiments to determine the following points, not only in regard to purity of wax, but to ascertain other points desirable to know.

Experiment A was with 7½ lbs. of cappings; 1st, to determine the per cent of wax in cappings; 2d, to determine if the use of an acid was of any benefit in rendering wax. Divided the 7½ lbs. of cappings into 2 equal parts of 3¾ lbs. each. Put each half into a cheese-cloth bag; rendered one in the usual way; i, e., by putting the bag into a kettle of water, heating, and then squeezing out the wax. The other half rendered in the same way, except I added 25 per cent of vinegar to the water. The results were as follows:—

With vinegar, 2 lbs. 12 oz. } =5 lbs. 7 oz.
No vinegar, 2 lbs. 11 oz. }

Amount of wax from 7½ lbs. cappings, 5 lbs. 7 oz., or nearly 73 per cent, which is quite a per cent more than as reported in the *Bee Journal* by Mr. Bingham, I think. The wax rendered with vinegar seemed more yellow, and I imagined some softer; but as it gave only 1-34 increase, it is scarcely profitable; or, to state it differently, if one had comb enough to make 33 lbs. of wax by putting vinegar in the water, he could get 34 lbs., or 1 lb. of wax to offset the vinegar; as it would take about 1 gallon, worth, say, 20 cts., there would be no money in it. And we do not think there is enough difference in the quality to pay for the extra trouble.

Experiment B was to determine whether pollen would mix with wax, combs heavy with pollen being taken, mostly new combs, and rendered by putting in water only—combs inclosed in cheese-cloth bag. Result, a mixture of wax and pollen of a dark orange color, and a decided pollen smell. The wax was soft in texture, but at the same time brittle, or rather "short," if I am allowed the expression, something like a mixture of flour and lard—only, of course, not so much so. Next, to get rid of the pollen was the problem. I succeeded by simply heating the wax in a dish containing no water, until it was almost to the burning-point; this turned the pollen to charcoal, and it settled at the bottom of the dish as a black sediment, like salt in meat-fryings. There may be other ways of purifying wax containing pollen, but I tried none. The heating process is rather risky, on account of the danger of burning the wax. But if it is watched and removed from the fire as soon as the pollen begins to settle, there is not much danger.

Experiment C was to determine whether it would pay to melt up drone comb to make foundation, for every bee-keeper knows what a nuisance too much drone comb is, especially if you run your bees for extracted honey. And I am of the opinion, good authority to the contrary notwithstanding, that bees fill worker combs quickest; I am sure that honey ripens in them first.

To ascertain the facts, I took 410 square inches of drone comb, about one-half new, the rest old, and melted it up, which resulted in 1 lb. 4 oz. of wax. This would make, of foundation running 5 ft. per lb., 900 square inches, or nearly 2 1-5 times as much comb surface as was contained in the combs melted. So my conclusions are, it will pay. I also found, while conducting this experiment, that it would pay to have a press to use in rendering the wax, especially if the combs are old and full of cocoons; for nothing but strong pressure will take all of it out of such combs. C. A. HATCH.

Ithaca, Richland Co., Wis., Jan. 25, 1883.

I have for some time been of the opinion that vinegar does not give us a greater amount of wax, perceptibly, but some seem to think it makes it separate from the debris quicker. I am a little surprised at the results from cappings, given by both yourself and friend Bingham. Who will tell us what this substance is that is not wax, and then can not some way be devised for making fdn. for brood-combs, containing ¼ or more of some foreign substance, say paper or wood pulp? Who will work out this next great problem of something to save the expensive wax now used for our combs in the body of the hive?

SHALL WE USE A SMALLER SECTION, OR NOT?

FRIEND G. W. STANLEY'S IDEAS ON THE MATTER.

SINCE Messrs. Crocker & Blake, of Boston, Mass., have quoted honey in ½-lb. sections at high prices, there has been quite a rage for that style of package. Now, would it not be well for us to look the ground over ahead of us before making expensive changes in our surplus arrangements? As there seems to be some difference of opinion as to whether one can produce as many pounds of honey in ½-lb. sections as in larger ones, I will not discuss that point, but will only show my reasons for using the larger sections. I use the 5 x 5 sections, just because I see no need of using a smaller one; and to illustrate this I will say, that last season, when the ½-lb. section was selling in Boston at 30 cents per lb., my honey in 5 x 5 sections, holding nearly 2 lbs., glassed, was selling freely in a city near home at 24 and 25 cents, which, as figures will show, gives a balance in favor of the 5 x 5 section with glass, to say nothing of the extra amount of labor that is required to use the small section; and as most of the manipulating comes when our work is crowding, both in shop and yard, and at a time when wages is high, and skilled help is very hard to find, it is to our advantage to get our bees in shape to do the most actual work in the least possible time, in order to do justice to all our bees and still be able to get our needed amount of sleep.

When the 1-pound section was first introduced I thought that it was not needed, or, at least, we were crowding upon ourselves a convenience for the public, if such we may call it, which the public did not at that time require of us; and as those who then took up the pound section mostly discarded the use of glass, that was, of course, a great loss to producers. But some will say, that they can not sell glassed honey. And why is this? Because they are selling it without glass, and telling people that it doesn't pay to buy glass. In the past seven years I have raised upward of 25,000 lbs. of comb honey, and have sold it all at good prices, and have never sold 10 lbs. without glass during the whole period. I have no dissatisfied customers that I know of, and have many calls for shipments of honey after my stock is exhausted. When I commenced I used the Isham glass box; but as they were replaced by the section, I fell in line and first used the 5 x 6, but finally settled down to the 5 x 5, and now I have a standard brand that is as good as gold in any market that has not been spoiled by too small packages.

To sum up, I find the honey market about what bee-keepers make it, and all we have to do is to get the most honey we can from the fewest bees, and with the least possible investment of capital and labor, as that seems to leave us the most money in the fall, and that is what we keep bees for, here in York State. G. W. STANLEY.

Wyoming, N. Y., Feb. 1, 1883.

NOTES AND QUERIES OF AN AMATEUR.

HOW HE SAW THE BEES RAISE A QUEEN, ETC.

PERHAPS I had better introduce myself to you, as an introduction to my letter — it being my first letter. An important part of my introduction is, that I am a subscriber to GLEANINGS, and thus far think the money invested in your monthly has paid me largely. I have but one objection to advance; to wit, it does not come often enough. I have read the January number over and over again, until I can almost cite page and position of page where I shall find an article upon a given subject.

For a great many years I have had more or less to do with bees; but not until last summer did I give any special attention to apicultural study. I read every thing pertaining to bee culture I could get hold of, and partially put in practice what I read; or, at least, as far as means and circumstances would permit. As I had but one hour at noon, I must needs do what I did in the morning and evening. I began in the spring with 4 colonies of hybrids that I had wintered on the summer stands. These four I divided, according to my notions of that plan, in the evening, thus increasing to 8. I then thought I would try my hand at raising a queen for an emergency. I went to one of my strong colonies and obtained a splendid capped queen-cell, and inserted it in a sheet of capped brood, with bees enough to cover it; took a sheet of honey and pollen, and formed a two-frame nucleus in a hive that had an observation-glass so that I could watch proceedings. I did watch that cell closely, I assure you; and in due time, to my great delight, saw the queen emerge from her prison. It just seemed to me that the bees were as much elated over the advent of her royal highness as I was. How proudly she moved, circling around the now empty cell, each round increasing the circumference of the circuit, until suddenly she observed a queen-cell in an upper corner of the frame, but just capped, and, quicker than I can tell it, she was there, and as quickly destroyed the royal occupant. She was such a large, beautiful queen that I resolved to build up to a strong colony with frames of capped brood from other of my strong colonies, which I did. In due time she began to lay, and now that colony is one of the best I have. This made 9. I then obtained 2 second swarms from a neighbor for assistance rendered, and bought a first swarm for $1.00. That brought me to 12. At this time I traded a thoroughbred Berkshire pig for seven more. This gave me 19. I bought a dollar queen, which, I think, has more Cyprian blood in her than I care about possessing. They fight like tigers. The little scamps just double themselves up to see, seemingly, how deep they can get their darts into one's flesh. They got up my sleeves, down my back, into my hair, up my pants, and such "pointed" arguments of the venom their little bodies contained, as I got then!

So much for the progeny of that Italian (?) queen. In September I purchased two tested queens. One has proved all right. The other proved to be a drone-producer; and ere I was aware of it, she and the entire colony gave up the ghost. She will be made good the coming season by the gentleman of whom I purchased her. I also lost one of the 7 I purchased, before it was delivered, which will also be made good this summer. During the month of September (for that month gave us in this locality about all the honey we got) I took in boxes, and extracted, as nearly as I can guess, about 300 lbs. I think if I had weighed it, it would prove to have been more rather than less. I now have 17 colonies in the best condition, packed in chaff on the summer stand. Yesterday being a beautiful day, I let them have a fly, which seemed to please them very much. **FRANK M. SNYDER.**

Urbana, Ill., Jan. 30, 1883.

BEES IN KANSAS.

FROM 9 TO 28, AND 325 LBS. OF HONEY.

I AM still an A B C scholar, and am still pretty near the foot of the class. I began last spring with 9 medium colonies. The spring proved so very cold and wet that the bees got no benefit from the fruit-bloom, so I had to feed till the middle of June; they then began to fill up very fast with bees; in July they took the swarming fever, and no amount of room, nor any of the rules laid down, would stop it; so I just *let them swarm*. They increased from 9 to 28, and all filled up well with honey.

I did not get the extractor I ordered of you soon enough to get much honey; that is, I did not *order* it soon enough. It came promptly on time, and is a good one too. All the trouble was

THICK HONEY.

My honey was so very thick that the strainers would clog so as to hinder operations. Having to stop and change strainers so often, I finally made one four inches in diameter, of mosquito bar doubled, and then got along much better. I obtained 325 lbs. of honey, very thick; weighs 12 lbs. to the gallon, which I sold at 20 cts. per lb.

I found an old-style bee-keeper who told me he was going to kill some bees to get the honey. I told him if he would let me, I would go and take out the bees and try to save them. He consented. So, late in November, I went and took out 8 swarms, doubled to 6, and gave them 5 frames of sealed honey; packed with chaff cushions on each side, and chaff cushion on top, and now they are all on their summer stands, nearly buried up in snow. I feel pretty sure that another fall I will put my bees in a clamp, *a la* Boomhower. There every bright sunny day the bees will not come out and perish on the snow, as some are doing to-day.

Then the dollar-queen business, that ought to have been included in friend Wiltse's "Fallacies," in bee-keeping. Some of my very best queens I bred right among black drones; two queen-cells I grafted (from the same comb) into 2 nucleus hives; one was a bright yellow queen, and the other was a very dark leather-colored one. Each produced three-banded bees. These experiments prove to me that home-bred dollar queens are often as good as any.

I have bought quite a number of dollar queens of friend Hayhurst, and only *one* proved to be impurely mated, and that one he promptly replaced. If all the dollar-queen breeders were as square as friend H., there would be no cause for complaint. I should not like to pay 3 or 5 dollars for a queen that its owner had kept one-third its lifetime, used it one year to test it, and found just what I could have found out, and had the whole season's use of it. I expect to use dollar queens till I see differently than now.

HONEY-DEW.

Last summer we had a great amount of honey-dew—the first I ever saw. It was on the cotton-wood-trees in town; every case proved to be the work of the aphis. The honey-dew dropped on the sidewalks till, in some places, they would show the large drops like the effects of drops of grease on a pine floor; yet the bees would not work on the leaves of this tree more than till 9 o'clock, when the sun would have dried it up. I am somewhat afraid that it may cause dysentery among the bees this winter. **J. W. MARGRAVE.**

Hiawatha, Brown Co., Kan., Jan. 27, 1883.

MOVING BEES FOR BETTER PASTURE.

THE WAY FRIEND SWARTWOUT DOES IT?

EACH year as I watched the honey come and go, I have been more impressed with the idea, that to gain the most profit I must move my bees. The next questions which came into my mind were, when, where, and how to move. As clover and basswood form the main crop here, and as it would cost about 30 cents per colony to move, I thought it would pay better to feed up to clover-bloom. It does not cost much to feed when your colonies are weak, and a little honey is coming every few days; but at the close of the basswood, with heavy colonies and lots of hatching bees, it is quite a different thing, so I decided that was the time to move.

Where? Where there are marshes with plenty of fall flowers, or buckwheat bloom. Be careful not to overstock, as it is much easier than you think in the fall.

How? Extract all the honey, with the exception of 6 or 8 lbs.; place two thicknesses of burlap over the frames, and close the entrance with wire screen. If you are working for comb honey, remove all sections that are filled, or nearly so; extract what is left, to be used to fill those removed which were not finished, as it is white honey; fill up with sections, put on the burlap, and close the entrance with wire screen. Have every thing all ready the day before you move, so all you have to do is to close the entrances and take off the tops. Have a good spring wagon — platform springs are the best; place it as near the bees as possible. Now get up early, close the entrances; take off the tops; place the hives on the wagon, with the frames running lengthwise, as they will ride much better in that position; hitch on your team, and, where the road is smooth, drive rapidly so as to get to your destination before the sun is very hot. Unload your bees; place where you want them to stand; open the entrances, and look to see that no frames have been moved.

The man who moves bees once with these conditions will move again. **J. J. SWARTWOUT.**

Union City, Mich., Jan. 4, 1883.

Very good, friend S.; but I wanted you to tell us just how much you gained by it, and, in short, a full report of your proceedings and success in the matter. It is true you give us a hint that you did well, but we want to know just *how* well.

THE GOLDEN BEE-HIVE.

WITH A GOOD MORAL ON PATENT HIVES IN GENERAL.

PERMIT me to say, through GLEANINGS, that I use the "Golden" bee-hive, and would not exchange it for any other hive in use that I have ever heard of. The inside is almost identical with the hive used by A. J. Cook, described in his Manual, pages 132 and 133. The frames are 10¼ inches deep by 11⅛ inches in width, outside measurement. Frames go crosswise, with division-board behind. I commenced using it four years ago, and would say to Mr. Lewis A. Easterly, of Sandy Ridge, Ala., that I have in my experience found the hive just the reverse of his. I paid for the use of the hive, one hive and a swarm transferred into it, and an extractor—$15.00. It was the best invested $15.00 I ever made. I have made over 200 of them, and expect to make 75 more this spring. They are the leading hive here. Several bee-men who have the Langstroth and Simplicity hives are transferring their bees into the Golden.

I had an old bee-man work for me one week last summer, who has 40 to 50 stocks in Simplicity hives; he said he was certain I was getting one-third more honey in the Golden than could be obtained in the Simplicity. * * * * * * * * *

The first winter, 1879-'80, I used it, I had 32 stocks in them; lost none. The winter of 1880-'81 I wintered 86 with ten loss; 1881-'82 I wintered 90 stocks with the loss of one. I put in my cellar this winter 119; so far they are all O. K.

Now a few words as to honey results: The summer of 1880 I had 32 stocks in the Golden; 15 in box hives, spring count. I got 4500 lbs. of honey. The summer of 1881 I had 50 stocks, spring count; I sold down to that number in the spring; sold to one man $100.00 worth. I got 3500 lbs. honey, about one-third in section boxes. The summer of 1882 I sold down to 80 stocks, spring count. I got 8000 lbs., 2000 lbs. of it in section boxes.

OVER A TON OF HONEY IN EIGHT DAYS FROM EIGHTY COLONIES.

On the 19th day of July—Saturday—last summer, my bees began to work on basswood. I had kept well extracted up on white clover, for I expected a basswood flow. On the Tuesday following, three of us began to extract; swarming was also going on, and by Saturday night we had taken 2200 lbs., *eight days' gathering;* during the same time my comb-builders put up 800 lbs. comb honey. Now, at the price I got, 12c for extracted and 20c for comb on track here, my bees gathered $424 worth of honey in eight days. How is that for Golden bee-hive?

I have arranged the hive for comb section-box honey; each top holds 36 sections, upon which arrangement there is no patent; indeed, there is no patent on the hive as I use it now, while I have not changed the body of the hive an iota. I know the hive is a success. I commenced at the beginning four years ago; result, about 18,000 lbs. of honey.

Trusting you will give this a place in your valuable paper,—yes, valuable, for I owe much of my success to its teachings,—I remain truly yours,

B. F. LITTLE.

Brush Creek, Iowa, Feb. 9, 1883.

I am very much obliged indeed for your good report, friend L.; but if you will excuse me, it seems to me you have most effectually spoiled it as a testimonial for the Golden hive, or the men who sold rights, by that little speech toward the last, where you say, "Indeed, there is no patent on the hive as I use it now." Mitchell, and all the rest of them down, have had a patent on some unimportant trifle hitched to the hive; but every progressive bee-man, almost invariably, of his own choice, soon drops these things, just as you have done, and still the patent man goes on taking money for rights. Is this "right," I ask you? I never intended to intimate that one could not get honey with the Golden hive, but only that it is a swindle to ask people to pay for a right to make any thing about it that is of any practical use. Very likely you and many others would succeed better with a frame of different dimensions from the Simplicity; but why buy a right for making them so? If you will look over our back volumes you will see, friend L., that the Golden hive has been used a good deal for defrauding in different ways.

BLUE THISTLE.

SOMETHING ON THE OTHER SIDE OF THE QUESTION.

GLEANINGS, page 87, gives an account of Division Grange, London, Ont., regarding blue thistle, and resolution therefrom, apprehending great danger to the farming community in consequence of the introduction of the same. Now, while I earnestly hope that no bee-keeper will introduce, or be the means of introducing any weed, plant, or shrub, that will in any way interfere with the agricultural interests of our fair land, I hold that we are fully justified, and should be encouraged and assisted by the farmers and the public, in changing the present condition of our waste places, fence-corners, and road-sides, of which many are grown up with worthless shrubs, brambles, burrs, ragweed, dog-fennel, etc. These, with justification to all concerned, should be destroyed, and the ground reseeded with clover, figwort, or, in fact, any good honey-plant or shrub would be an improvement on the former, to say nothing about the increase of nectar, and the enhanced value of real estate, if such change were made.

Well, I started out in search of the evils of the blue thistle, and here is what I have found. Judging from the tone of many letters that have been written on the blue thistle, I was not very favorably impressed; I therefore addressed a letter of inquiry to a gentleman in West Virginia. Note his reply:—

> Your letter of inquiry regarding blue thistle is received. I would say that I have traveled over a large portion of Shenandoah Valley, and find that the best farmers court its presence, regarding a crop plowed under as good as clover to enrich the soil. Try a field of it, and you will be convinced of its untold value as a honey-plant. J. A. SHADE, M. D.
>
> Pleasant Dale, W. Va.

I at once introduced it into my experimental garden, and here is my report, after two years of trial:

Biennial; root fleshy, tender, and very large; it makes a perfect root first year, but does not grow any the second year. Blooms June 1st, and continues without any diminution fully four months, unless interfered with by frost or drought; seed as large as red clover, and can not spread by being carried by wind. At close of flowering season the root will be found in an advanced stage of decomposition; bears cultivation, and is highly benefited thereby. As to its honey-producing power, I now place it at the head of all plants that I have tested. Blue thistle first, figwort second, and white clover and basswood next. Its chief value is the extraordinary length of time of its bloom. Contrary to my expectations, when basswood bloomed, the bees did not desert the blue-thistle patch, but kept right on, and seemed as much pleased as before and after.

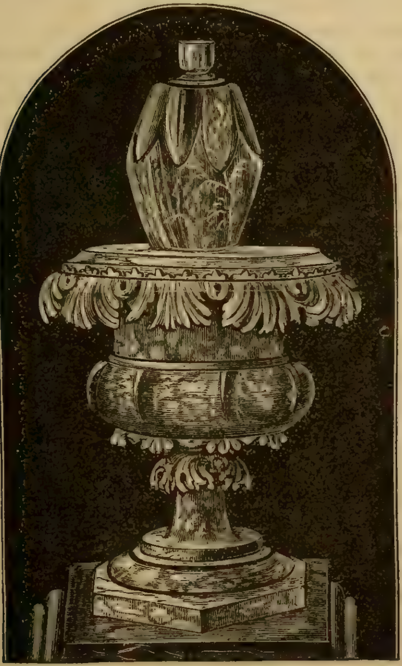
May I not suggest, that many of the discouraging letters that have been written have been owing to the fact that this plant is called a thistle, they concluding that all thistles are bad and noxious weeds? My experience so far is, that it is just as harmless as figwort, motherwort, or mullein. If plowed under or pulled up, that ends it; and as it seeds only the second year, it can be easily overcome. The word thistle carries with it a settled conviction of thorns and jaggers; but not so with this plant; yet it is covered with fine short bristles, but they will not injure the hands while in a green state.

Bloomdale, O., Feb. 10, 1883. R. B. ROBBINS.

WATER FOR BEES.

A PRETTY DEVICE FOR A WATER-FOUNTAIN, SENT US BY A BEE-FRIEND OVER THE "WATER."

SINCE beginning bee-keeping, many years ago, I have always regularly supplied water to my bees by various modes, and send along with this a photo for your acceptance.



A WATER-FOUNTAIN FOR THE BEES, FROM FAR-AWAY SCOTLAND.

The watering-stage on top, with gutters from a common center to a circular one, outer circumference, I had originally cut in marble; but being too expensive for general use, I applied to a large pottery establishment, and from it had a mold made and copies reproduced in polished white earthenware. They require great pains in firing, to preserve a true level, but are much superior, and do not split off like wooden ones. The bottomless water-bottle, or barrel, set thereon, is fern engraved, and has a nice cool refreshing effect to the eye in hot weather.

J. M. MCPHEDRON.

Craigbet, Renfrewshire, Scotland, Dec. 7, 1882.

Perhaps I should explain to our readers, that we have cut down the height of the pedestal some in our engraving, but it shows pretty well the handsome design our friend McPhedron has furnished us. I know wood is hardly the thing for the base of our watering-jar, and some of the friends may remember I first used a stone washboard, with the sides of the grooves stopped with wax; but the grooves were too large, and the bees pushed under, and rose up into the jar, and were drowned. The grooves need to be so small that a bee can not even wedge his head in one of them; for if he does, many will get fast and die; and who wants to see dead bees sticking around a nice feeder? After this I had a block of sandstone hewed out, and set the water-jar in a cavity in the top of this; but to my surprise I found the sandstone would take up a whole pail of water in no time, and during a dry atmosphere it would absorb and give off water about as fast as I could bring it. I should be very glad of some stone china grooved feeding-boards. Who can furnish them in our own country?

PUTTING THE SECTIONS UNDER THE BROOD-NEST.

HOW FRIEND SHANGLE GOT 204 POUNDS OF HONEY FROM ONE HIVE.

YOU wanted to know how I got that 204 lbs. of honey from that swarm of bees. I waited till my bees got their hives full of bees and brood and honey; then I raised them, put another story under, full of sections, when they commenced working in the sections. I extracted the brood-frames, and got 24 lbs. The queen filled them with eggs. She did not bother the sections. I kept watch of the sections, and when they got them full I took them out and put more in their place.

DAVID SHANGLE.

Judd's Corners, Mich., Jan. 19, 1883.

This idea of putting the sections under the bees is hardly a new one; yet I doubt if many have made it work as well as friend S. did. One of our English friends some time ago said we would get lighter honey by this means; but my experience has been rather to the contrary. Where we have strains of Italians that are so determined not to go up into an upper story to store their surplus, this plan might work admirably, only it seems to me it will be a little laborious to raise heavy stocks of bees every time we want to put on or take off—beg pardon; every time we want to put *under*, or take *out* filled sections, or case of sections. Who can tell us more about it? and is the honey whiter than that stored above, or to the contrary?

A BOOK ON INTRODUCING QUEENS.

ALSO SOMETHING ABOUT UNITING BEES.

WE make the following extracts from a little book of 28 pages, coming from Sam'l Simmins, Rottingdean, Brighton, Sussex, England: —

For many years there has been no better way of introducing an alien queen to a stock of bees than that of confining her in a cage for a number of hours, until the bees get acquainted with her; and should the operation be conducted at a time when there are few young bees and no brood, it is often necessary to encage the queen several times before the bees will accept her, and occasionally even then she is destroyed after all the loss of time and labor.

Some of the foremost bee-keepers of the day are now and then perplexed with a difficult case, and resort to the unnecessary practice of stupefying the bees to get them to take a strange queen. One scientific bee-keeper reports how, after making a colony senseless seven or eight times, they destroyed his queen after all.

During summer, when bees are breeding, and bringing in honey, it is generally an easy matter to get them to take a new sovereign; but bearing in mind the many inconveniences, and loss of time occasioned by using the cage, and, above all, the colony being deprived of a laying queen for a day or two, perhaps at the most important time, I determined on prosecuting a series of experiments, in the hope that I might ultimately dispense with the old method entirely. I have, fortunately, succeeded beyond my most sanguine expectations, and under my system, described in the following pages, a queen can be introduced direct, and absolutely without risk, to any colony, whatever may be its condition, providing there is no other queen in the hive.

I have successfully introduced queens forthwith to colonies with fertile workers, having at the same time queen-cells sealed over. Also to old bees that had been queenless and broodless for several months, and to ordinary colonies with queen-cells in all stages of development, up to the moment of hatching. I have also exchanged a queen of one hive with that of another at one and the same operation, and the bees have taken no notice whatever of the change.

THE SIMMINS METHOD OF DIRECT INTRODUCTION.

Having often united bees without disagreement, by alternating the combs of the respective hives, I came to the conclusion that a queen on a comb, parading unconcernedly among her own bees, would be taken no more notice of than the others; and this I have, by unvarying success, proved to be the case, and the amount of vexation, time, and labor, saved to myself, has already been considerable.

INTRODUCING QUEENS FROM NUCLEI STANDING IN THE SAME APIARY, OR RECEIVED FROM A DISTANCE — ON STANDARD FRAMES.

Where one has spare queens in nuclei, and all the frames are of one size, a queen can be introduced to the desired colony simply by inserting the frame of comb on which she is, surrounded by her own bees.

Carry the comb from one hive to another in an ordinary comb-box; remove the queen that is to be superseded (if one), and as soon as the stranger, with her attendants on their comb, is placed in the hive, the union is certain, and there is no need to examine them again until their turn comes in the ordinary course of manipulations.

It will be observed, that instead of the bees being first permitted to find out their loss, the exchange is completed before they are aware of the fact; and the colony is not without a laying queen even for five minutes — a great consideration, especially when building up at the commencement of the season.

A queen received from a distance in a nucleus hive with frames of the right size, can be united, together with her bees, in the same way; but it is advisable that the nucleus be first placed near the full colony, and the bees allowed to fly. By evening they will have recovered from the excitement of the journey, when the union may take place.

QUEENS RECEIVED IN SMALL BOXES; OR THOSE ON ODD FRAMES.

In the above case the queen should be shaken with her attendants into a comb-box on to a comb containing unsealed honey;* close up securely, and leave them for a few minutes, while the colony to be operated upon is being deprived of its queen, when the combs should be parted at about the center of the hive or cluster of bees. The sides of the combs nearest this vacant space and the adhering bees may then be sprayed with sweetened water (*not* scented), when the occupants of the comb-box on their comb may be immediately inserted, as in the first instance, and all will be well.

A queen can also be inserted *alone*, on a comb of unsealed honey (or syrup). In this case she should be without food for a short time previous to being placed on the comb, when she will at once proceed to feed at the open cells, and, while doing so, can be inserted (together with the comb) as before.†

Where on odd frames, a queen can be brushed off the comb with a good number of bees into the comb-box, with a feather, and then united in the same way.

CONDITIONS NECESSARY TO INSURE A SUCCESSFUL UNION.

Brushing the queen from a comb with a feather is much to be preferred to handling her; and if the operation is quickly performed with a light touch, she is not rendered restless and nervous, as is the case when liberated from the hand.

When introducing a queen on the comb from her own hive, no syrup whatever is necessary, and none should be used; but where she is first placed on to another comb, the conditions are different. She has been disturbed by being turned from one box or hive into another, and in some cases a long journey has preceded the change; therefore it is best to use a little, as advised, just to give the bees something to do for a time, in case any such queen should show a momentary nervousness, which, however, will soon pass off, and no hostility is shown toward her.

On no account, in any instance, should a queen be daubed with syrup, or disturbed more than is absolutely necessary, as so much depends upon her appearing among her new subjects in an unconcerned manner. This is just the secret of the success of this system. The queen is placed where she feels at home — on a comb, surrounded by a number of her own bees. On the other hand, bees are delighted to receive a comb of honey, especially if it also contains brood, as is mostly the case where the queen is transferred on her original comb.

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* If a comb containing unsealed honey is not at hand, a little syrup can be substituted by pouring it into the cells on either side of a comb before it is given to the strangers, previous to their introduction.

† Wherever a queen may be placed, whether being alone or with a few attendants, she should be kept warm; the slightest chill being injurious to her constitution.

It is a mistake to suppose that bees can not be united unless they have the same scent. Wherever there is a case of fighting in uniting bees, it has been brought about by the new comers not making themselves at home in their fresh quarters, and this attitude of uncertainty and strangeness is sure to bring down upon them the vengeance of the original inmates of the hive. This state of things is brought about through the operator being ignorant of the peculiarities of bees, and therefore not proceeding with his work upon the right principles of management. In his hands the result would have been the same had both lots of bees been sprayed with scented syrup.

By following the rules laid down in these pages, the merest novice may always succeed in uniting alien bees or queens to any desired colony, and no scent need be used in any case.

Where the bee-keeper has no spare combs, one should be taken from the colony that is to receive the queen, but *every* bee must be removed before it is given to the queen and her attendants in the comb-box.

The author very rarely uses syrup in any case, and never where the queen is inserted on her original comb; but where it is advised, the novice can not do better than follow the instructions given, when he can be assured of a satisfactory result.

IMPORTED QUEENS, CAUSE OF DISAPPOINTMENTS AND FAILURES WITH; HOW THEY SHOULD BE INTRODUCED.

I would never advise that a good laying queen be disposed to make room for one just received from a long distance. The latter will not produce an egg for the first day or two, and very few for a time, when she does begin, and will often be two or three weeks before she recovers her natural fecundity. Some never lay at all, while others, for a time, produce as many drones as workers, and soon die, or are superseded by the bees, if the bee-keeper does not trouble to do it himself. Long confinement and exposure are the causes of this tardy development and failure of production; although, of course, there is the probability that by an oversight a queen may not have been mated before being sent out. In that case she would either not lay at all, or produce drones only.

Bearing these facts in mind, the careful bee-keeper will give imported queens to nuclei, and either gradually work them up to a full colony, by occasionally giving frames of brood; or, after a few weeks, unite them to the desired stocks. Thus the condemned (and often prolific) queens are not displaced until the new comers have had a chance of proving their fertility.

UNITING BEES; THE FALLACY OF USING SCENTED SYRUP.

As I have never used scented syrup when uniting bees, I will only say that my success has proved that the various articles advised for the purpose are simply useless. In every case where a union has been effected, when adding peppermint, etc., to the syrup, without hesitation I assert that the same result would have been attained without the scent, and, in the hands of an expert, without syrup in any form. If the bees are rendered predisposed to fight, through the operator not understanding their peculiarities, or the exact condition of those in hand, it matters not, even should he smother them in syrup, scented or otherwise, fighting will result.

The following directions will show how bees can be induced to amalgamate under all conditions, and without being sprinkled with syrup of any kind.

UNITING BEES WHEN ON THE SAME-SIZED FRAMES.

If the hives to be united are not already adjoining, bring them a few feet daily nearer to each other, keeping the entrances toward the original directions. In the meantime take away all combs that the bees can not cover; and when the hives are brought together, remove the queen that is not wanted, and then insert the combs with the adhering bees of one hive alternately with those of the other. What few are left about the sides of the denuded hive can be brushed out, or shaken on top of the frames, when the hive may be closed up, and the union is effectual; the remaining queen also being undisturbed and allowed to reign supreme.

WHERE BOTH COLONIES ARE IN ODD-SIZED FRAMES.

Bring them together as before, remove one queen, and then shake off from their combs the whole of the bees of both lots on to a wide board slanting up to the entrance of the hive they are to remain in. Give plenty of room at the entrance, and all will unite in one happy family. Should there be any brood left in the rejected frames it should be given to other hives containing the same size, or it may be cut out and fitted to those of the size given to the united bees, and placed about the center where it will soon be fixed up.

UNITING DRIVEN BEES, OR A SWARM WITHOUT COMBS, TO AN ESTABLISHED STOCK.

It will be of no use to toss the strangers on top of the frames, thinking they will draw down among the occupants of the hive. In that case instant fighting would be the result, and this will continue until the intruders are exterminated.

The only effectual plan is to shake or brush off from their combs the whole of the bees on to a board as before, and then after removing all but the selected queen, mix the new comers up indiscriminately with the rushing, "fanning" crowd, and all will draw in peaceably together.

The same method applies in the same case to straw hives, except that the bees will first have to be driven out of the fixed combs, and then returned together with the strangers.

WHERE BOTH LOTS TO BE UNITED HAVE NO COMBS.

Being either swarms, or driven bees, nothing is easier than to mix up both lots on a sheet, or board slanting to the front of the hive, when they will all draw under cover together.

In every instance there is one thing that must not be neglected, and that is, only one queen must be retained, whether selected or otherwise.

FERTILE WORKERS; HOW TO GET RID OF THEM.

The means generally adopted to exterminate them, though not always effectual, besides entailing much labor, is to remove the hive to some distance from the old site, when, by shaking from the combs the whole of the bees, the main body fly back to the original location, while the laying workers, supposed not to have flown, are thought to be unable to return.

My method of direct introduction always answers most effectually in disposing of the nuisance. No matter how bad the case may be, even if they have queen-cells (so-called, but containing only drone larvæ), the fertile workers subside immediately on the insertion of a queen on her own comb of brood with adhering bees.

While we feel under obligations to friend Simmins for his experiments in this matter, and also for so earnestly directing more attention to this subject, I feel a little sorry to see him so positive that his plan will work *invariably*. If I make no mistake, it is exactly the same thing that most of our readers have done every year, in uniting nuclei. Lift the bees, combs and all, out of one hive, and set them into the other; and if either one is queenless, there will ordinarily be no trouble. It was once a favorite plan of mine, to take a queen, comb and all, and set it right in the center of any other colony; but after I had a fine queen stung, with every bee that the comb contained, along with her, I concluded there were exceptions, and stopped. Since then we have used the same plan for uniting bees so much, with so few failures comparatively, it has occurred to me that we had not given the matter sufficient attention. A year or two ago somebody said a queen could be let loose at once, in a colony made up of combs and bees taken from several stocks, and all mixed up. We tried it, but found them the most difficult to get to take a queen, of any in the yard. Pure Italians will unite and receive queens, almost any way; but cross hybrids are quite a different thing, for introducing or uniting either. While I feel sure that there will be failures with the above plan, I would advise giving it a more thorough test this coming season, and very likely we shall find it a help. I am strongly in favor of some plan by which the queen may go right to work the day she is put in the hive; and many of you know how much I have said about letting queens right into the hive without any introduction at all.

Ladies' Department.

IS BEE-KEEPING TOO HARD FOR WOMEN?

A CALIFORNIA WOMAN'S EXPERIENCE.

I HAVE this morning finished reading December GLEANINGS; and though money is not plentiful with me, I would rather lose $10.00 than do without the knowledge gained from that single number, from the articles by Doolittle, about rearing queens, Heddon on swarming-basket, and other articles too numerous to mention. But not for this am I writing to you now, but to answer a question by a lady. Is bee-keeping injurious to woman, and the labor too great? The best answer is practical experience.

I was in delicate health, every summer sick with nervous prostration (caused by teaching during winters), and malarial fever; and to overcome both difficulties we exchanged our home in the rich San Bernardino valley for one in the mountains. I started bee-keeping with two swarms of black bees; and as they were moved 50 miles in June, they reached home in a sad plight — broken combs, drowned bees; but by knowledge gained from A B C and GLEANINGS, I built them into strong colonies, and had honey enough for home use. Sick six weeks in July and August of 1879. Next year I made one new swarm, and honey enough to buy our flour for a year. Sick again in August and September. Doctor thought it impossible for me to recover, and for several months my arms were paralyzed; but by spring I could drag myself about, but, oh so feebly! and I would work amongst the bees, which I increased to 5 swarms. Day by day my strength increased, and nothing seemed to bring it back so much as the outdoor exercise, which the care of bees necessitated. That winter I taught school. In the spring I went back to my bees; increased them to 14 strong swarms, and 3 light, which lived through the most severe winter ever known in Southern California. In 1882 the swarms were increased to 40. We extracted over a ton of California buckwheat honey, and about 200 lbs. of goldenrod honey, and realized $143.00 from what we sold. White sage was a failure, owing to spring cold and summer drought.

But the main point to be deduced from the above is, that *I am well*, and owe it principally to daily excise in the open air, which my care of bees makes necessary. I love the work, and am happy in doing it, and mean to make it, in the coming year, my chief means of support. There is much hard work to be done, some suffering from stings, but the last is mitigated by turning smoke upon the spot, after taking out the sting. I know you are skeptical about the smoke, but I have tried it upon persons who had large swellings, and were made sick, until I told them about using the smoker.

We have a new honey-house, a railroad and car, by whose aid the frames of honey will be relieved of their sweets through the extractor, replaced in the car, and pushed back to the hives. As there is a slight descent to the honey-house, gravity will help to move the car.

I am fortunate in never having had a case of robbing, or moths. The only real difficulty is in losing queens when extracting. I shall have to use separators, to keep the queen from combs to be extracted.

NOT ALWAYS QUEENLESS, WHEN QUEEN-CELLS ARE STARTED.

I sent you a card, that the honey Holy-Land queen was lost in introducing, but think I was mistaken. The bees did start queen-cells, but the bees now are grayish, with yellow bands, which corresponds with your descriptions of them.

P. S.—I find, on looking at the above writing, that it is very crooked, which was due to writing in a dim light. Please excuse it. My hands have never entirely recovered from the paralysis of three years ago, and I feel it nowhere so much as when writing. I hope you will continue to prosper. I believe that in so steadfastly upholding the Christian faith by word and act, you are doing much good.

MRS. W. W. WILSON.

San Bernardino, Cal., Dec. 18, 1882.

May the Lord bless you for your kind and cheering words, my friend. Never mind the cramped writing, when it tells of new life, of health and strength gained, and that, too, without the help of doctors or use of medicine. I do believe that the great secret of deliverance from ills of both body and mind is some open-air exercise, with the enthusiasm you show in your letter. Show me an invalid with enthusiasm in bees, berries, flowers, or the like; and if the enthusiasm is great enough to induce him to push all his remaining energies right into the work, every waking moment, it scarcely matters what the disease is, nature will soon begin to assert herself, and a natural process of building up and growth will commence, and with it comes happiness, joy, and a spirit of thanksgiving to God the Creator. When you get so busily absorbed in some healthful work that you forget your disease, it will forget you, and go off. I have been through it, and know whereof I speak.

FROM 19 TO 44, AND 2600 LBS. HONEY.

My bees did very well the past year, considering I had but 19 colonies, spring count. The most of them were blacks, with but a small amount of honey, and some of them were in the old-fashioned bee-gums. Dr. J. R. Baker was my bee-keeper for two years. I lost all my bees and bee-house by fire in Feb. last. I had then 51 colonies of Italians, so I could buy only 19 colonies, as they were scarce around here. The docter increased to 44 colonies by natural swarming; some went to the woods. We got 2000 lbs. comb honey, and 600 lbs. extracted. We got 15 and 20 cts. per lb. for comb, and 12½ for extracted. No foundation was used in the brood-chamber, and only small starters in sections. We used 2-lb. sections. We built a cave last fall. All my bees are in it, except a few. The temperature is nearly always 45° above zero. Do you think that is too warm for them? I left off the caps, and tacked burlap over the tops of the hives. Do they need water during winter? I am learning to be my own bee-keeper the coming season, if they don't sting me too bad. I think I shall succeed, for women often do harder work than caring for bees. I like Mrs. Harrison's letters very much, and I know we have to *work* if we want honey. I like GLEANINGS very much, and shall continue taking it while I live.

MRS. ESTER WIRT.

Keithsburg, Mercer Co., Ill., Jan. 20, 1883.

I do not think 45° too warm for the cellar, if it is well ventilated with plenty of pure air. It is rather an unsettled matter about bees needing water; but this we know, that bees do winter nicely without any more water than what is contained in their honey, ordinarily. It may still be, however, that they many times die, where water in their winter repositories would have saved them.

A WOMAN'S SUCCESS, REPORTED BY HER HUSBAND.

My wife is determined to have one of your comb-mills, but I can't see where she will get the wax for it. Her bees are all in splendid shape yet. They have not been out of the hives since Nov. 24th. I looked at them yesterday, and I saw they could sting yet. I raised the chaff from one, and they were lively as could be; but the buckwheat chaff is the material for them. Our neighbors are somewhat uneasy about the long winter. Mrs. A. F. E.'s bees stand clear profit for her; and if they die, she is on a balance, and has the honey and combs to begin new. I tell her if some of them die she will have some wax to work on her fdn. mill. We have a spring that is running from 80 to 90 inches of pure water, and 11 ponds, which never freeze over. We have about 16,000 brook trout, from the sack of the egg up to 13 inches; also about 550 catfish, and some German carp. My wife has taken 128 lbs. of one-pound section honey from one colony—the same frame you use. I call that good. Her 31 swarms average her $8.00 apiece; her bees are in the yard yet, and some of them could have given 25 lbs. more taken from the brood-chamber.

A. F. EILENBERGER.

Laddsburg, Bradford Co, Pa., Jan. 22, 1883.

A NEW PLACE FOR BEES.

There has a swarm of bees come in under the clapboards of an unoccupied house on our farm, and no one about here knows much about bees. I hoped to find some suggestion that would show me whether I had better try to save the bees, or do as every one says, "Kill them for the honey in the fall." A neighbor had a swarm in his house, and because he hung a hive up by the side of the hole, with molasses on it, and they would not go into it, they are sure I can't do any thing with mine. We found them first last summer. I know of a house within two miles that is full of bees. They have been there for five or six years, no one being able to get them out. If I could get bees out of a house, I should be welcome to *them* too. Although that house is so full, no hive could hold them all. They have so much room in an old house that they never swarm. MRS. S. P. HADLEY.

South Canterbury, Ct., Dec. 28, 1882.

My friend, your difficulty is a very trifling one to any bee-keeper at all up with the times; but it would be pretty hard to give you directions what to do without going through almost the whole science of bee culture. I fear all we can do for you is to tell you to study the A B C book a little, until you know something of bees, and then transfer the bees into a hive, according to the directions in the chapter on Transferring. It would seem as if hives and hollow trees were scarce in your locality, if you oblige the bees to crawl into holes in old houses.

MAPLE SUGAR FOR FEEDING.

Mrs. Jennie Culp, one of our A B C scholars, reported at the Ohio State Bee-Keeper's Association as follows:—

> I gave each colony 1½ lbs. of maple sugar; had 22 colonies; increased to 30; I extracted the first of June; put the honey in 6-gallon stone jars, to ripen; had over four barrels of extracted honey at fair time (Sept.); extracted after the fair; altogether had nearly 5 barrels of honey. I attribute my success to feeding in spring, and to having plenty of surplus combs. I sold all my surplus honey at 20c per lb.

It was voted that Mrs. Culp had produced the most honey, for the number of swarms she had, of any member of the society.

QUEENS NOT LAYING, AFTER BEING MOVED FROM ONE HIVE TO ANOTHER.

I have furnished a few tested queens from my own apiary to my neighbors, and when I caught one very fine queen, and caged her for a gentleman who was standing by, he remarked, "What nice brood, and so much of it!" That queen never laid an egg for him, though he kept her three or four months. On another occasion I furnished another neighbor a queen, and a short time after, when I asked him how his queen was doing, he replied, "The bees received her all right, but she is acting rather strangely. Sometimes I find three eggs in one cell." I was glad that he had selected his own queen, and that, too, on account of the large amount of brood in the hive; but in a few days more he informed me that she was behaving very well. MRS. A. C. MOSHER.

San Marcos, Texas, Feb. 14, 1883.

Heads of Grain,
From Different Fields.

I COMMENCED last spring with one stand, and it increased to seven by natural swarming. One swarm came to me and threw out another, which makes me 9; two are rather late. I shall have to feed them, which will start them to rearing brood. Will bees winter (especially those that hatch now) without pollen? I want to increase my bees next summer as fast as possible. I don't care for honey till after I get plenty of bees. My bees are in the cellar, the honey-board off, and the frames covered with baize. They seem to be doing well. You can consider me a subscriber for your journal right through, whether I make any thing from bees or not. I shall keep a few for amusement. I have been a bee-hunter for several years, but never have been situated for keeping them till now.

E. C. EAGLESFIELD.

Poy Sippi, Waushara Co., Wis., Jan. 26, 1883.

Why, if you keep on at that rate you will have plenty of bees for a beginner, in about one year, friend E. I am glad to see your enthusiasm; for if you hold to it, you are almost sure to succeed. In fact, I have sometimes thought old bee-hunters are, as a rule, good bee-keepers; for a man who has the grit to hunt bees will be pretty sure to hang to them when he undertakes to keep them. I believe it is generally agreed, that bees winter as well, or better, without pollen.

BITTER HONEY.

I visited bee-men in Wilkes, Alexander, Caldwell, and Catawba counties in July, 1882. All gave reports of bitter honey. Some of them have since lost heavily in bees. From what source do they obtain the bitter honey? There was a little of it here, but not much.

H. A. DAVIS.

Moretz Mills, N. C., Jan. 8, 1883.

Several conjectures have been made in regard to the plant that furnishes the bitter honey, but I believe we have nothing very positive. It seems as if some one suggested the honey might have medical virtues, like quinine, bnt I don't recollect just now where it was.

BEES BY THE POUND TO UTAH.

Last season I sent for a queen and ½ lb. of bees. Twice they arrived nearly all dead; the third time they came to hand in fine condition (too late to gather honey, but made a good stand of bees). There was a small comb in *this* cage, attached to the center, which I think is a very good idea. They built, as I suppose, a small comb on each side of it, which I found to contain eggs.

W. W. TAYLOR.

Lehi City, Utah Co., Utah Ter., Jan. 16, 1883.

I am very well aware, friend T., that bees should be put up so they will build comb, and have the queen lay eggs on the way; but I have been trying almost ten years to manage so as to give food and drink in such a way we can do this every time, but we only now and then hit it. In your case we gave water on one side, sugar candy on the other, and a section with a stout comb in it, partly filled with honey. If we could always get plenty of these partly filled sections with good strong comb in them, without costing too much, I believe it would be just the thing.

WIND-BREAKS, ETC.

In regard to wintering bees, I read of so many that have taken their bees out of the cellar with the dysentery, I was always afraid to try the cellar. I will tell you how I winter my bees. I have them on a south hill-side, and I put a solid board fence around them, 6½ ft. high, which breaks off the cold north wind, and I have fruit-trees set inside of fence, as I think in a very appropriate way for shading, aside from the value of fruit. I always winter on the summer stand, with good success. I scarcely lose any since I have learned to look after them in the fall. My bees paid me first rate this season. I sold $206 worth of honey, and I could have sold more, but I did not like to rob them very closely. I had last spring 20 stands; I now have 33, all in good condition.

S. W. SUESBERRY.

Steeleville, Ill., Jan. 30, 1883.

HEART'S-EASE AS A HONEY-PLANT.

The bee-plant of this place that I rarely see spoken of, I rank first. It is the heart's-ease, or heart-weed. The kind that yields so much honey grows from 2 to 4 feet. There is a kind that grows 6 or 7 feet high, but the other is the best for honey. It blooms from about July till frost, and the honey is about as good in taste and whiteness as white clover. It grows in corn-fields, and in the small grain-fields after the grain is cut, till frost. There is a small annual shrub, or weed, I think it is called cassia, that grows very plentifully in places that the bees work on finely. They seem to work on the stems or branches where there are small blisters, nearly or quite as much as on the blossoms.

EXTRACTED AT 10C., OR COMB AT 18C.; WHICH?

Which will pay me the better, to extract my honey and sell it at 10 cents per lb., or work only for section honey at 18 cents? I never used an extractor.

JOHN HASKINS.

Empire Prairie, Mo., Jan. 24, 1883.

Thank you for the fact of bees getting honey from the stems and branches as well as from the flowers, friend H. I should advise you to raise comb honey, at the prices you quote; but there are many who would think differently.

HOW FAR BEES FLY.

I see in your comments upon friend March's article in Dec. GLEANINGS, you ask, "Can a bee fly 90 miles an hour?" P. H. Elwood gave, at our N. E. Convention several years ago, how bees had been let loose from a train of cars moving 30 miles an hour, and they, describing circles, kept up with the train, which would make 90 miles an hour. I think I have given the statement somewhere, and it is probably what friend M. refers to. If you will turn to page 152, Vol. 3, GLEANINGS, you will see how you have been converted from a "doubting Thomas" to a believer.

G. M. DOOLITTLE.

Borodino, N. Y., Dec. 4, 1882.

I knew you had something somewhere in regard to the matter, friend D., but it did not occur to me at the time. I own up, and beg your pardon; but for all that, I must still hold that *our* bees do not, as a rule, fly more than about three miles, or at least they did not when we had the first Italians in the county. The season or circumstances may have had something to do with it, but I watched very carefully, and even took buggy-rides out into the country, to decide the matter, and, no matter which way we went, the Italians grew scarcer and scarcer on the clover-heads, and finally disappeared altogether, after about such a distance. I may have forgotten exactly what the distance was, but it seems to me we found none further than 2½ miles from our apiary.

Bees have done well here this year. My 24 hives averaged about 50 lbs. to the hive.

MATRIMONY VINE.

I have a shrub growing in my garden that I think is the best honey-plant in the world. It is called the willow jessamine (I don't know its botanical name); it blooms from April till October, and the bees work on it from morning till night, and in wet or dry weather. The bloom is about the size of barberry, and the color of lilac; it ripens but few berries; it suckers quite freely. If you are not acquainted with it I will mail you a sprout, if you desire it. I have tried most of the honey-plants, and think this the best. Don't think I am trying to humbug; I have no plants for sale. S. S. JOHNSON.

Hudson, Mo., Dec. 26, 1882.

From your description, friend J., we pronounce the plant the matrimony vine, which we have several times mentioned, and have growing in our garden. It does at times furnish quite a little drop of honey, but I do not as yet see how it can be profitable, cultivated as a honey-plant.

REPORT OF AN A B C SCHOLAR.

The January GLEANINGS has arrived, and I am delighted with it. As there are a great many reports in it, I send you the following taken from my account:—

By 15 colonies,	$75 00	
By 373¼ lbs. honey,	75 48	
Total receipts,		$150 48
To 2 old colonies in April,	$10 00	
To 3 swarms in June,	12 00	
To hives,	10 50	
To sections, frames, etc.,	8 52	
To queens, and comb fdn.,	22 87	
Total expenses,		$63 89
Balance profits,		86 59

I have counted the bees at $5.00, but could not buy them for that, as they are in large hives, and are heavy. The honey was all in the comb, mostly in 1-lb. sections. My best colony made 130 lbs., and the most made in 24 hours by one colony was 8¼ lbs.

AGE AT WHICH BEES GATHER POLLEN AND HONEY.

Will bees gather pollen and honey at the age of five days?

I have used neither tobacco, liquor, nor profane words for nearly five years. CHAS. VAIL.

Michigan City, Ind., Jan. 28, 1883.

You will see by referring to p. 57, 1882, that friend Wiltse decides they do not attempt to gether honey until about six days old, and no pollen until about the eleventh day. I am inclined to think, however, that young bees do sometimes gather pollen at a much earlier age than his experiment indicated. Glad to know you are a "clean" man, friend V.

A HONEY-BEARING HONEYSUCKLE.

I have a plant, a kind of honeysuckle, that blooms in midwinter; and last February, when I brought my bees home, they covered it from morning till night, and got large quantities of pollen and honey from it. I do not know the name of it, and have raised it only from layers as yet. T. L. WASHINGTON.

Nashville, Davidson Co., Tenn., Dec. 5, 1882.

Friend W., we should be very much obliged for a small slip of this plant. Can any of the brethren tell us more about it? Why *shouldn't* a "honey" suckle bear honey, I should like to know?

FROM 3 TO 14, AND 400 LBS. OF HONEY.

I commenced with three colonies—one Italian and two hybrids. I had 8 natural swarms in May, and 4 in June, making 12 in all; two went to the woods for me, so I have now in all 13 colonies, all strong in bees and honey. My bees made me a little over 400 lbs. of nice comb honey, and the brood-combs were nearly solid with honey besides, after the honey season. My hybrids yielded me more honey than the Italians, but they paid me well for it by stinging me much oftener. All things considered, I like the Italians better. I never have a bee-veil, nor any protection about me, when I work with the bees. W. R. DUM, 3.

Elliottsburg, Perry Co., Pa., Jan. 29, 1883.

CELLARS AHEAD, WHEN IT IS 60° BELOW ZERO.

We are having the coldest weather here ever known. Jan. 22d the thermometer marked 60° below zero; the mercury went into the ball here; the air was as white as a heavy fog; every thing was snapping. I think bees will not winter very well here this winter, especially those out of doors. I have 5 packed in chaff, outdoors; they are diseased some now. I don't expect to get them through the winter, safe. I have got 29 in the cellar in apparently fair condition. If this cold weather holds on long, I do not think outdoor wintering will succeed very well in this part of the country. G. W. WILSON.

Viola, Richland Co., Wis., Jan. 23, 1883.

FROM 6 TO 17, AND — NO HONEY.

I had six hives of bees last spring, from which I got 11 swarms by the old method of swarming. We did not get much surplus honey here, as we had a very rainy spell in June and July. There was plenty of white-clover blossom, but very little honey. I am now wintering 14 swarms; 10 of them in frames, and four in boxes. Two of my frame hives are two-story, something like the Simplicity, and I like these better than any I have seen here; they are so convenient for holding the small sections, and they come out cleaner than by any other plan. The bees can not get at the outside of the sections to cement them. I find that we could get hives and sections from the U. S., but our national policy, as it is called, puts 25% duty on hives, and that stops us. WILLIAM MOWBRAY.

Lambton, Ont., Can., Jan. 23, 1883.

I presume you already know, friend M., that I would not be in favor of duties, any more that I would be in favor of patents, or any other kind of monopoly. I like to see all men have a fair chance, and believe it is with nations as it is with children. The fewer rules and restrictions we have, the better, providing always we do not let liberty run into license.

FROM 6 TO 20, AND 300 LBS. COMB HONEY.

I thought I would send you a few lines and let you know how bees did in this vicinity the past season. I commenced the season with 6 swarms; increased to 20 by natural swarming; got about 300 lbs. of honey, all comb, in sections, and about 100 lbs. in frames for spring feeding, if necessary. I had my first swarm the 24th of May, which was a hybrid.

A SWARM DETERMINED TO ABSCOND.

My second swarm was one I had some trouble to stop. They were bound to go to the woods; and as the swarm had my best purchased tested queen, I felt like making them stop, which I did after they had got about ten rods from the hive. I stopped them with a looking-glass. Well, I hived them, and they did first rate; filled their hive with brood and honey. But in just 30 days the same tested queen led out another swarm, and I was about half a mile from home. I heard the bell ring, which told me the bees were swarming. By the time I got home, the swarm had got under full headway, in spite of all the efforts of wife and children to stop them. I followed them for about a mile, and they went into the body of a large white-oak, about 50 feet from the ground. I did not want to lose my tested queen, so I went to the owner of the tree and got leave to cut it, which was no little job, as it was four feet through at the base. They went in at about 10 in the forenoon, and I cut the tree the next morning, and I found them in a nice hollow of the tree, and the hollow was full of old comb, nice and clean; probably it had been cleaned and kept so by my bees. I think they intended to go to that tree when I had such a time to stop them the first time they swarmed. They were in the tree about 20 hours, and the queen had laid in a large number of the cells. She left eight sealed queen-cells in her hive when she went to the woods.

Hillsdale, Mich., Jan. 21, 1883. **FRANK RAY.**

REPORT FROM AN A B C SCHOLAR.

As my bees are in their winter quarters, and are so far all right, I will send in my report. I began in the spring with five colonies, in good condition.

APPLE HONEY IN BOXES.

During apple-bloom it was rather cool; but the bees did well, and one colony stored some 20 lbs. of surplus. I must here say, I never knew apple-bloom to hold on so long as last spring, being nearly three weeks. May 15th I put twenty 1-lb. boxes on my best swarm, and the 25th they were nearly ready to take off; all apple honey. I tell you, I felt *good* all over at that; but it is nothing new to you, I suppose. But it again grew cold, and there was a suspense of some ten days; in fact, all through white clover it was too cool and wet to get much, but still they kept up breeding lively. June 28th I hived my first swarm, and three more the first week in July, so you see I did not get much from my increase. One swarm got away. I let my little brother watch them, and he says he got "tired," and went off to play. I will now relate what I saw last summer.

HONEY FROM HOYA AND JAPAN LILY.

I saw the bees working hard on mother's Hoya all summer. We have a fine specimen covering a frame about 3x8 feet, very densely; it is a beauty. I really wish you could see it when in bloom. I also saw them work on the most beautiful of Japan lilies, the "*Lilium auratum*." There were great drops of honey on all the petals all day. As soon as they had carried off a drop, another would form, and so all day, until darkness compelled the bees to leave until the morrow. Now for my report: Started in spring 5 swarms; increase, 4; went to woods, 1; surplus full boxes, 327; surplus partly filled, 115. I am satisfied, for I am away down near the foot of the A B C class. Have sold most of my honey at 16 cts. Now a few questions: Did the little earth-flea ever bother your spider plants? I set out some 200, and in less than 24 hours had not one left.

OTTO G. JOSENHANS.

Owosso, Shia. Co., Mich., Jan. 22, 1883.

Will you please tell us if you found the apple-tree comb honey good for table use, friend J.? We extracted some one year, but none of us liked it.—I have seen the honey run out of the Japan lily, but never saw the bees at work on them. Our spider plants have never been molested in the open air at all; but a green worm ate up a lot of them one spring in the greenhouse. Did you not set out the plants when they were too small?

I began the season with 16 stands, and increased to 42; have taken 1000 lbs. of extracted honey, about 500 lbs. comb; 35 stands I have in cellar; the rest on summer stands. Bees swarmed more in August than any other month this year. One swarmed five times, and I put them back every time; at last I took away all their combs, and they stayed. This was August 28; they now have 30 lbs. My bees are all very heavy in honey and bees. What would you give for a barrel of nice honey?

Oakley, Ill., Dec. 23, 1882. **FRANK BAKER.**

We have been paying 10 c. for clover and linden, friend B., but just now we have more *honey* than *money*. Isn't that "*funny*"?

HOW A NEW-ZEALAND FRIEND MADE HIS OWN FOUNDATION, ETC.

This is only the second season that I have tried frames, and I have succeeded beyond my expectations, as I have had to work under a good many difficulties. In the first place, I could get fdn. only in a roundabout way, with two shipments, and then only at a good stiff price, and bees would have to work hard to make it up; so I got a bit of comb and a bit of starter, and had a good look at both, and tried to make a press to make comb for myself. After repeated failures I at last managed to make one with common shoe-nails driven in wood, and filed up; I put five nails to the inch every way. I have two pieces; one bosoms in the other; and when I place a thin piece of wax between, it leaves the impression of the nails on both sides. I managed to get some of them in the boxes last season, and the bees worked very well on it. Still, it is nothing so neat or well done as the fdn. that is sold in the shops. **JOHN BLAIR.**

Tryphena, Gt. Barrier, N. Z., Oct. 29, 1882.

DISPENSING WITH SECTIONS.

While everybody is crazy about ½-lb sections (but me), I have a suggestion. Let us get our comb honey in the brood-frames. Then, having been to the tin-shop, get strips of tin, say 1¾ inches wide, and of a length that, when folded in the form of a hollow square, will just inclose half a pound of comb honey. The tinner might bend the ends of the strips into the form of hooks, then any one with a block of wood of the right size can bend them into squares, and hook the ends together. Now lay your brood-frame, filled with *nice* comb honey, flat down, and with one of my (celebrated) squares commence at one corner and press the square through the honey-comb, then another square right by the side of it, and so on till the last inch is filled and inclosed with these tin frames. Now set the whole thing back in the hive an hour or two, and let the bees slick up the edges, then take the thing out, unpack, and set away in the store-room. Or, instead of filling the brood-frames with these squares, remove each one from the frame as soon as it is pressed into and through the honey, and set it in the crate, allowing room enough between the squares to allow the bees to clean them all up nicely. Now I won't say eureka until *you* and all the big guns of the fraternity have had a chance to annihilate this whole letter. If any thing good comes of it, I will be on hand for a share; but if not, just bear in mind it is only an A B C scholar heard from, and let the wood-section men keep right on cutting up carloads of lumber for the summer trade. F. A. PALMER.

McBrides, Mich., Feb. 3, 1883.

Friend P., I did just that thing, years ago; but it was a dauby, sticky mess to handle, and the bees, instead of cleaning them all up nicely, just dug the comb out all around where the tin went, and it didn't succeed at all. I don't believe we can depend on the bees to turn in and help on any such device.

FIGWORT FOR HONEY, AND FOR SEED.

I have made a failure in the seeds of spider plant and Bokhara clover, but I regard the figwort as a treasure. It grew to be 7 or 8 feet high, with garden culture, with many and wide-extended branches, full of tiny blooms (honey-cups), from about the middle of Aug. to the middle of Nov. They were visited by swarms of bees, butterflies, wasps, yellow-jackets, and all honey-loving insects, from dawn till twilight. Neither the poplar nor the linn was more visited. If a bee-keeper had five to ten acres, well set in figwort, I think he might calculate pretty surely upon having enough honey to carry his bees through the winter and spring, if every thing else failed.

This brings me to what I set out to say, or, rather, to ask.

WILL IT PAY TO GROW FIGWORT SEED FOR SALE?

It may kill two birds with one stone. Have the bloom for my bees, and the seed for sale. What will you offer me for such seed as I may have for market next fall? or what will any one else offer me, and who will it be? If I can get a remunerative market, I think I shall plant pretty largely next spring.

Columbia, Tenn., Dec. 22, 1882. W. S. RAINEY.

I can not tell you what I could pay for seed next fall, friend R.; but we have been paying $1.00 per lb. of late for it. I know a very good thing could be done raising seed, at any thing like present prices, but demand and supply regulate all these things. It is some labor to get the seed nicely separated, but we found by sifting it in the wind, when there was only a very light breeze, we could get it comparatively clean, and then by sifting it through perforated tin, having the right-sized perforators, we get it very nice and clean, with comparatively little trouble. It may be that many have been deterred from saving the seed, by the difficulty of getting it clean, by ordinary means.

WIRING FRAMES FOR FOUNDATION.

I like wired combs, but find that when the wires are put through the top and bottom bars they will not prevent the frames from sagging when 6 or 8 lbs. of honey are put into a new comb. I have a lot of wired combs now that will crush bees in the bottom of the hive. The weight of honey causes the wire to cut into the wood. Another thing: It is almost impossible to get wax or propolis off the frames without cutting the wires when they run along the outside of the frames. Could you not cut hooks from tin, instead of the wire staples suggested by C. H. Deane, on page 615? I think the second form would be best. They should be long enough to clinch, which might be done by the bars being laid on a bar of iron, when driving them in. Please let me know as soon as possible your opinion of the above, as, if you could make them work, I would cut out my frames accordingly.

A. G. WILLOWS.

Carlingford, Ont., Can., Dec. 8, 1882.

Your tin staples will answer, without doubt, friend W., but it will be a rather expensive job to drive and clinch them, I fear, and, if not clinched, I fear they would pull out, with very heavy combs, and then we should be as badly off, or worse, than with the wires that cut into the wood. The last-named feature has been of service to us, in making the wire cut into the wood a little, when it would be too tight otherwise. We have never known combs so heavy as to make the bottom-bars sag, but we use entirely No. 30 wire; in trying to use No. 36, we had some trouble such as you mention. We never scrape the top-bars so close as to cut the wires. Friend Doolittle says he does not want his top-bars scraped at all, for the wax on top is the very best thing to induce the bees to go up into the sections above. Some kind of staples, or tin points, that could be put in rapidly enough, and would not pull out, would be quite desirable; but I am a little afraid we shall not be able to do it.

THE FLOOD OF HONEY IN INDIANA.

Last spring, when the fruit-bloom opened, April 7th, bees fairly tumbled in with their heavy loads of honey. On the 10th we had quite a snowstorm, and freezing, which destroyed all the bloom until June 4th; then the raspberry and blackberry bloom opened. Bees went for them with a rush, as at that time they were short of stores, and some colonies actually starving; most of them had their drones all killed and dragged out of their hives. First natural swarm issued June 6th; on the 10th I commenced extracting. On the 29th, basswood bloom opened up nicely; bees gathered honey rapidly from this source till July 13th. Next was white-clover bloom, which lasted up to Aug. 15th. Then the late sumac bloom opened, fairly dripping with honey, which gave the bees all they could do till September 1st; then the fall bloom opened, which lasted till the 1st of October. Swarming was kept up through all this continuous honey-flow. Of course, we obtained a nice crop of honey, and have our bees in splendid condition for winter. WM. PARMERLEE.

Bean Blossom, Ind., Dec. 2, 1882.

This is quite interesting, friend P.; but most of us would like to know just how much honey you did get, and how many bees you have. You see, we bee-folks are "naterally inquisitive like."

A WINTER ENEMY OF BEES.

I send you by to-day's mail a specimen of a bee-mole that sometimes does serious harm to bees in this part of the country. My bees have been confined to the hive since Thanksgiving, until yesterday (Jan. 30), when they got a good fly. I took off the cushions and quilts, and let in the warm sun, and they flew out in large numbers, and covered every thing with their discharges. In opening one of my chaff hives that was strong last fall, I discovered that the bees were nearly all dead, and that the combs were gnawed along the top-bars. I proceeded to investigate, and found three of these little "varmints" down among the dead bees at the bottom of the hive. I destroyed them all, and charged up $7.00 to the account of bee-moles. The one I send you is the largest one of the number. They passed into the hive through the entrance, which measures exactly ⅜ of an inch. They consume all of the bee except the head and wings. They do not injure the combs very badly. Their presence in the apiary may be known when snow falls, by their roads under the surface of the snow; traveling as the common ground-mole does. They seem to be able to pass into the hive through an opening that will permit a bee to pass through; and as soon as they become gorged are unable to pass out again. They are a very small animal, yet able to do a great deal of damage inside of the hive.

Bees have suffered badly during the past part of the winter — worse, I think, than they did during the winter of 1880-'81. The temperature has not been so low as it was during that winter, but the bees have not lain dormant as they did then, and have consumed more honey and pollen, and have not been able to get out and empty themselves, and they have discharged in the hive, and the result is, that weak colonies have nearly all died with diarrhœa. I think that the experience of bee-keepers this winter will tend to make the question, "How to winter bees," more difficult to answer than ever.

REPORT FROM ONE WHO SELLS BEES INSTEAD OF HONEY.

My report for the past year is more satisfactory than any former one. I turned my attention to raising queens and bees, and offering them for sale. I made a specialty of five-frame nuclei, which sold readily at fair prices. I began the year with 23 colonies; sold 40 5-frame nuclei; increased my stock to 46 colonies; extracted honey, 450 lbs.; comb honey, 400 lbs. I expended about one-half my labor in working with my bees, and manufacturing hives and comb fdn.; the remainder of the time I spent working at my trade. I satisfied myself, also, that bee-keeping is a remunerative occupation, and propose to devote my whole time to the business in the future. WILLIAM LITTLE, 46.

Marissa, St. Clair Co., Ill., Feb., 1883.

TESTING CHAFF HIVES, ETC.

You have the chaff hive, and use it, I think. Will you take an empty hive, put in it a dish of water, then fix it as you would if a colony were in it; let it be fully exposed to the weather, and then note how low the thermometer may run, whether to zero or not, without ice showing in the hive thus prepared, and give me your results, as I am experimenting a little in that direction, but with a different material, and I'll change results with you. The great problem to solve is, how to winter our bees successfully. If I can get a hive, and as cheap and light as a single wood hive, and yet so warm that water won't freeze with thermometer marking zero, or even 6° to 10° above, I think I'll have a success for our climate, as we usually have so few days as severe, or more so, than that, that the bees can stand it until something better is found. I am hopeful, but not satisfied, so far. If I can make it to reach zero, and no ice, I shall be fully satisfied, feeling I have a success for bee-keepers. C. F. ASHLEY, M. D.

Ypsilanti, Mich., Jan. 29, 1883.

I think, friend A., you have fallen into a very common error. If you allow time enough to elapse, the water would freeze up solid in any chaff hive you can make, as I understand it. The trouble is, that a dish or pail of water does not produce or give out heat, like a swarm of bees, or as a living animal does. It contains some heat, of course; but after this is gone, it gets just as cold as the surrounding substances. If well packed, or blanketed, it would keep the water a longer time without freezing, it is true; but a swarm of bees would keep the interior of the chaff hive warmed up permanently, because the covering retains the animal heat they are constantly generating and giving off. For the same reason, clothing warms our bodies, or keeps the heat from falling; but if clothing were put over a block of marble, standing out of doors, it would not change the temperature of it a single degree, by the thermometer, no matter how many overcoats or shawls we brought into requisition.

THE GREAT HONEY-YIELD IN IOWA; WHERE DID IT COME FROM?

The past summer was the most profitable one known to bee-keepers since the settlement of the State. Bees stored most fabulous amounts of honey in this part of the State. You probably would think the story was a little "fishy," if I should tell you the amount of increase and honey many of us obtained from a certain number of hives. The honey was of the best quality. The spring was wet, cold, and backward; in fact, the whole summer was wet and cool, and the impression of bee-keepers was, that the business would be a failure for the summer. But about the 10th of June bees began to swarm and store honey rapidly, and continued to do so until the 14th of Sept., when the weather became too cool, and was soon followed by slight frosts. Now the question is, To what do we owe this unusual success? The basswood bloomed about as usual here, and the bees seemed to store about the usual amount of honey from it; but soon after it went out of bloom they began to store faster than before, and continued to all the summer. The only unusual bloom was a good crop of white clover, but not more so than some former summers. Many days were so cool that the bees did not leave their hives until nearly noon; but still the honey increased in the hives wonderfully. The advocates of honey-dews stoutly contended we had many of them, yet I could discover nothing of the kind. Now, is it your opinion that honey-dews ever occur? Is not the so-called honey-dew the exudation from the leaves of trees caused by wounds from insects?

Oskaloosa, Iowa, Jan. 11, 1883. B. F. LINDLY.

I am not yet satisfied that honey ever falls as dew, although many claim that it does. Our back volumes contain a great amount of facts in the matter.

AN ENTHUSIASTIC A B C SCHOLAR.

I have been making hives and fixtures all winter; am making all for L. frames, as I believe that will be the standard all over the land in due time. I bought an old sandpaper machine, and easily made a foot-power saw, which I can do all sorts of hive work on, and don't you think I am so interested that I work up to 10 o'clock and after, every night.

I had 18 swarms last summer; am wintering 12, all on summer stands, but one in cellar. I kept chaff cushions on all summer, and think it a much better way where we are not working the upper story for honey, especially with such a cold season as 1882. I like the looks of your chaff hive better than all others I have ever seen, and I have made one something like them, and don't see how you can sell them so cheap; but I suppose machinery does it mostly.

HYBRIDS AHEAD.

I have my hives all in the shade of plum-trees, and the one that did best last season was up close to a building on the northeast side, and under a tree at that. This was a swarm of hybrids that I bought and transferred in January, 1882, which were nearly out of feed when I bought them (which I thought was the case), so I just thought I would see what I could do. I transferred them the middle of January, and put them on one frame of honey taken from another swarm in the fall. I closed them on each side with division-boards and chaff cushion. In two days the weather gave them a good fly. I began feeding early, and made one extra swarm by giving them a queen. Now I shall rear a few queens from this one, as she is all I can wish — good to handle, and great workers, let the color be a little mixed or not; wouldn't you? I tell you, friend Root, I just love bees. I got stung all of *three times* last summer, and I transferred a dozen or more swarms too. I do not use a veil; but your Clark smoker is what knocks the temper all out of them.

SMALLER HOLES IN THE SMOKER-GRATE.

I wish to tell you that I would make the holes through the round tin of the smoker a little smaller, as coals will drop out as they are now. I put wire cloth over mine, but it must be cleared out often, as it is too fine. I spent my Fourth of July in the apiary, and wish I could see you and your city of bees.

E. P. CHURCHILL.

North Auburn, Maine, Feb. 12, 1883.

If I were a honey-raiser, and wanted queens for my own use, I would as soon breed from a hybrid that just suited me as from a full-blood Italian queen; and I am not sure but that I would feel a little safer with a small admixture of black blood.—We have tried making the smoker-grate with smaller perforations, but it is then so much more apt to get clogged, we have chosen the size of holes as we now make them. It is a question between two evils, you see; having the grate clog, or letting small coals of fire out occasionally.

LARGE REPORTS, ETC.

Many wonderful things in GLEANINGS I see; and without raising a doubt about their truth, I would ask how it was done; what kind of hives; where were the sections put, at the side — near the brood-comb, or on top in crates, etc.? All these particulars should be given, or the statement of the great result is of no use to your readers. The *how* would help me very much, as I wish to know the best way to handle my bees. I have no doubt a great deal more honey will be gathered some years than others. I would not publish the result unless the method pursued be also given. J. HILL.

Emerson, Jeff. Co., O., Feb. 15, 1883.

I hardly agree with you, friend H. The plan of working is given so fully in every issue of GLEANINGS that it is generally supposed to be fully understood. Where extraordinary results have been obtained, or where some different plan of working, other than the ordinary one, has been used, I believe the friends usually give us the details. I am inclined to think, my friend, you must be a new comer, not yet quite fully acquainted with us and our work.

ASPARAGUS AS A HONEY-PLANT.

On page 89, H. V. N. Dimmic asks the question, "Is asparagus a honey-producing plant?" I should say it is. Several years ago I lived in a district where fruit and vegetables composed almost the entire crop of the surrounding farms; and within a radius of three miles there was thirty or forty acres of asparagus grown; and as it generally blossomed during a dearth of honey I had a good opportunity to judge its value as a honey-producing plant. My bees worked on it from early morn until dark, and gathered from ½ to 2 lbs. per day. The honey is light in color, and has a peculiar acid taste, somewhat resembling raw unripe clover honey. It was very thin, and thickened very slowly. It is a profitable crop to raise for market, and would pay well for that alone; but I do not think that it produces a sufficient quantity of honey to warrant a bee-keeper in planting several acres for honey alone; but if a ready sale could be found for the vegetable in spring, it would pay bee-keepers to raise it, thus helping to keep up the flow of honey through the season. EDWARD S. FOULKS.

New Albany, Ind., Feb. 12, 1883.

ANOTHER WAY TO BIND GLEANINGS.

This is the way I do my binding of GLEANINGS and other book-formed papers. It might be with others as with myself; they would like to have them bound, but don't like to pay the price asked to do it. I place them right straight in a pile, the backs all to come out even. Take a ⅝-in. strip of suitable leather; through this drive three 1½-in. wire nails; then through the back of the papers; turn around, and lay with the heads on a hammer, and clinch the nails. Take another strip of leather and nail right over the clinches, with ⅝-inch wire nails. You can also make a good leather back by simply taking a wider strip of leather, nailing with 1½-inch wire nails, as at first. Nail the leather around the back, and nail over the clinches as before. By this way you can bind them as tight as any book-binder.

WM. K. DEISHER.

Kutztown, Pa., Feb. 10, 1883.

BLANKS FOR BEE-KEEPERS WHO LEAVE THEIR HONEY ON COMMISSION.

Will it not pay for you or Mr. Newman to get up a blank receipt-book for honey-producers to use with retail dealers in small country towns, where they leave honey to sell on commission? We want a receipt for the merchant to sign, itemizing the different kinds and sizes of packages, and to pay a specified price for all that he sells, and the balance not sold to be returned to the producer. I think our patent-medicine men use something of this kind, and I think there would be demand enough to pay for getting them out. E. LISTON.

Virgil City, Cedar Co., Mo., Jan. 22, 1883.

Thanks, friend L. Now who among our readers can send us a blank, such as patent-medicine men carry?

"THE OLD WOMAN THAT LIVED IN A SHOE," ETC.

You have read of the "old woman that lived in a shoe," etc.? Well, I have more bees than I want, or know what to do with; and if they swarm as they did last year, I shall be sorely puzzled. I have black, hybrid, and Italians. I haven't time to attend to them. If you get scarce, send me some cages, and I think I could send you a bushel or so. I know I shall have the bee fever when spring opens. As the darkey said, I had a "simpsom" of it the other day, when I heard such a roaring in my bee-yard that attracted my attention nearly a hundred yards off. The bees were out in fine force. The cold wave has kept them indoors until to-day. I noticed them peeping out, and occasionally one on the wing.

A FEVER THAT EVEN QUININE WON'T HELP.

Quinine will keep off an ordinary fever, but I don't know how to provide against the bee fever. Do you?

Ellaville, Ga., Jan. 17, 1883. C. H. SMITH.

Who will help friend S. out of his trouble? Can't Mrs. Harrison tell him what will do when quinine fails? She seems to be quite a wise doctor.

A PLEA FOR PATENT-HIVE MEN.

Judging from a letter lately received from a lady in Alabama, you owe the "Golden" bee-hive man a compliment. She says, "Until last year, nearly every one here used box hives; but the Golden bee-hive man came along, and he deserves this much credit: he interested many in bees, and opened the way for information. I do not know why it is counted among the 'humbugs.'"

In this letter she says that she has A B C and GLEANINGS; and as this Golden bee-hive man opened the way for information, he must have told his patrons of your publications. I have been told several times, by persons, that the first they knew of improved bee culture was by traveling patent-hive men, and you should not be too hard on them, brother Root. MRS. L. HARRISON.

Peoria, Ill., Feb., 1883.

I "give in," my friend, that "patent-hive men" are sometimes of value, by turning the attention of people to the subject of bee culture. The yellow fever also turns people's attention to the subject of cleanliness; but I don't believe I should call it a very good thing to have around, though, after all. Can't we learn bees, and be clean, without paying so dearly for it?

OREGON AND WASHINGTON TERRITORY.

I see in your comments on the communication of friend March, of Washington Territory, in August number of GLEANINGS, you ask why they can not raise peaches and grapes, with such a climate as he describes, and then said: "Perhaps it doesn't rain, and you have to irrigate, as they do in California." Now, Mr. March has given a truthful account of the climate. They do not have to irrigate, for it rains enough, I assure you; but the truth is, that any thing will not do well in Washington Ty., or in this portion of Oregon, that requires warm nights to grow in, for the nights here in summer are nearly always cool, and seldom hot and sultry, as they are in the east. That is the reason why peaches, corn, and melons do not do well here.

HOW FAR BEES USUALLY FLY.

As to the account Mr. March has given, of bees working long distances from their hives, I do not doubt that they sometimes fly several miles through an open country, after flowers, when there are none nearer; but I think that in a country interspersed with timber, bees seldom gather much honey over two miles from their hives. M. E. WARREN.

Portland, Multnomah Co., Or., Dec. 3, 1882.

BEES AND NEURALGIA.

In years past I was a great sufferer from neuralgia, so I can sympathize with Mary Smith (in GLEANINGS); and while questioning myself as to the propriety of sending a prescription to a bee journal, the words came, "To him that knoweth to do good, and doeth it not, to him it is sin." I think hers is a very severe remedy, as a bee-sting makes me sick for several days. I did our extracting last summer. I have never been stung while working amongst them, as I never venture without the *armor*. I like working among the bees. It is healthful, and quite exciting — enough so for weak nerves.

The following I have taken for years, and it always cured for a time. One oz. tincture of iron; 25 cents' worth quinine; mix. Take ten drops (then increase to fifteen) in about four table-spoons of cold water four times a day. Eat plain food — graham bread.

I like the Home readings, as they do me good. I like the principle of carrying our religion into our working homes. May wisdom be given thee, to lay judgment to the line and righteousness to the plummet of the gospel, is the desire of thy friend —

JANE H. IDYLE.

Heathcote, Ont., Can., Feb. 15, 1883.

Many thanks for your kind words, my friend; but I am almost afraid your remedy is not one to be advised, even though it does bring relief. Your remark, "for a time," covers the whole ground. I believe our best physicians are getting to be a little loth in recommending quinine. Better take the graham bread, and plenty of outdoor air along with the bees.

FROM 1 TO 15, AND 200 LBS. HONEY.

After my loss by fire in Kansas last year, I brought one colony, saved from the burning wreck, and without feeding increased to 15, and 200 lbs. honey. But being in a strait with our church building, I sold them for $50.00 and put it all into the Lord's treasury. I have now 4 stands of blacks, which I bought very cheap. Our church and S. S. and Band of Hope are prospering. B. of H. numbers nearly 200. C. H. WRIGHT.

Siloam Springs, Benton Co., Ark., Jan. 22, 1883.

Truly, friend W., you have reason to trust in the Lord. With such a locality, surely you will prosper.

THE SQUEAKING MOTH.

Some years ago, when I was living in Nevada City, Cal., my notice was several times called to large beetles, or pinch-bugs, that were brought around the door in the early part of the evening by a young cat, and I soon noticed that they would make a kind of grating or squeaking sound. This noise I found to be produced by their rubbing their back legs together against the sides of their bodies. By holding them between the thumb and finger, so that they could work their legs freely, it was easy to see how the squeaking was produced. I have two specimens now in a cabinet.

THAT PLAN FOR A HONEY-HOUSE.

You are right when you say that no one plan will suit all bee-keepers any more than any one plan for a dwelling will suit all persons. You were also perfectly safe when you said you would give a hundred dollars for a honey-house plan that would "just suit you." I saw the "ketch" at once, and therefore did not spend much time on it; but it seems all did not see the "point." A hundred or a thousand plans might be sent you, and it would be an easy matter to say that not one "exactly suited you." I never considered it as a real *bona-fide* offer of a honey-house plan as it read.

A. A. FRADENBURG.

Port Washington, O., Feb., 1883.

Thanks for your fact in natural history, friend F. I believe insects, many of them, utter notes of distress or alarm in a way similar to the one you indicate, and yet they are as truly tokens of their feelings as if they did it with their mouths. Bees indicate anger or joy by the hum of their wings, and I presume other insect tribes do their talking in other similar ways, or, if I may be excused, in whatever way they have found, by long ages of practice, to be handiest.—I assure you, friend F., I had not the remotest intention of having any "ketch" in what I said about honey-houses, although it is true I did not expect to pay anybody just now for plans and specifications. I simply used the expression to indicate how much I thought we needed something of the kind. It seems to me that none of us know now just what we shall need. When we do I am ready to pay even more than that, to have an architect work it out.

ABUTILON, AGAIN.

I see you inquire about flowering maples, so I will try to give you my experience. My brother's wife has two large maple-trees, full in bloom. I don't know the full name. The leaves are green and yellow spotted, very attractive to the eye. One day she came to visit me, or, rather, say family, and brought me one of those beautiful maple flowers along. She knows I am very fond of flowers, and so she did that to please me. After my inspection or examination I found it to contain about 3 bee-loads of juice, or secretion, which had the finest flavor, or the nearest taste to natural honey, I ever saw. I think it a very fine honey-plant, if we only had enough of them. Please say what you think of it. Now, friend R., I have one question for you to answer: My hives are all facing the south sun, so you see the noon sun strikes the front of the hive very heavy by this time of the year. Monday last was a very clear day, but the wind has been so heavy and cold that most of the bees which left the entrance to any extent, were checked by the cold wind, fell down on the snow, and there they are sleeping yet, fully two swarms, I believe. That is interesting, boys, isn't it? Some of the stocks haven't been out for quite a little time, so I concluded to let them go, providing they were out every week or so. I think I should have shoveled up the entrance with snow, to make it dark inside. If convenient, answer soon how you would proceed under such circumstances, as I might get in such a fix again, ere long. You never answered me many questions. I will see what you will do this time.

D. E. BEST.

Best's, Pa., Feb. 14, 1883.

I am very glad to hear you corroborate the good report from abutilon, friend B. It seems to indicate that it is a regular habit of the plant to secrete nectar in this way.—As a rule I do not believe bees get out and get lost in the way you mention, very much, when they are in a state of health. This being the case, I have not very much faith in shading the entrances, or fastening them in their hives. Shoveling snow over the entrances might cool off the hive so they would not come out, or it might do a better thing by furnishing them the water they were going out after, and thus reduce them to quietness.—There are several reasons why I do not try to answer all the questions sent me; but the greatest is, that it is beyond my power, without neglecting other matters that I can not neglect conscientiously. The questions I pass over are, for the most part, because I don't feel as if I could give any valuable light on the matter, like the one you have just asked, friend B. I have just now been thinking of a shorthand writer; but they usually command great pay, and I am afraid they would not write just what I wanted said, even then. Thanks for your gentle reminder, friend Best, all the same, and I will try to do better.

AN A B C SCHOLAR WITH 83 COLONIES TO START WITH.

I am an A B C scholar in bee-keeping. Last spring I took on shares from a bee-keeper who was about to move to Colorado, 83 swarms—Italians, hybrids, and blacks, all in chaff hives. I never saw the inside of a hive before. I bought a second-hand A B C book, and borrowed GLEANINGS from a friend. As long as I keep bees I must have GLEANINGS. The past season was very poor for bees in this locality; but very few swarms issued. Instead of having an increase I went into winter quarters with only 70 swarms. Inexperience, starvation in spring, and moths, was what caused the decrease. I got about 1000 lbs. comb, and 600 lbs. extracted honey; sold the extracted honey for from 10 to 12½ cts., and the comb, from 15 to 20, per lb. Honey was mostly from white clover.

HANGING OUT.

A great many of my swarms in hot weather last August would hang out on the entrance-board, in big bunches, sometimes almost covering the front of the hive. I supposed they were going to swarm, but they did not. Whenever they hung out I took off the cover and set it crosswise of the corners of the top of the hive. If they could have been made to go to work it would have greatly increased the flow of honey. If an entrance were made in the upper story, in front or behind, would it not have allowed sufficient ventilation, so that they would have gone to work instead of "loafing"?

A "DUMMY" ON THE UPPER STORY.

In putting on an upper story, nine section frames do not fill it, so I put in one brood frame, which fills the space. Now, suppose I put a division-board in, instead of the brood-frame, would not the bees store the honey that would have gone into the brood-frames, in the section boxes? **CHAS. BALLAMY.**

St. Clair, Mich., Feb. 18, 1883.

A division-board, or "dummy," would cause the bees to put the honey in the sections; but if your hives are of such a width, I would rather have a few frames of thinner sections, and then you might test the advantages of thin and thick sections, side by side.—I do not think an entrance into the upper story advisable: it often induces the bees, queen and all, to vacate the lower story, and go above. Better shade the hives, or give ventilation at the entrance below.—I think, friend B., you would have made the season more profitable, had you sold all except about from 15 to 25 of your colonies, until you had had a little more experience.

FROM 32 TO 65, AND 1800 LBS. OF COMB HONEY.

I commenced in the spring of 1882 with 32 hives, mostly weak ones. I got 1800 lbs. of section-box honey, mostly from Spanish needle and honey-dew and bee-weed. I have 65 stands at present, all rich and strong; sold 8 swarms; had 14 run away, mostly Italians. I did all my work myself, and raised 500 bushels of corn from ten acres of ground; also five acres of buckwheat; got considerable seed, but no honey. **HIRAM PEER.**

Ellis, Ill., Feb. 7, 1883.

Pretty well done, I should say, Hiram.

A SUGGESTION IN REGARD TO SPRING DWINDLING.

Our president, Mr. S. I. Freeborn, said at our convention this winter, that he had noticed (after an experience of 25 years) that bees that had been wintered in a very low degree of temperature were always the *most* affected by spring dwindling. Have others noticed it? He said, that if they were kept warm enough so they would carry out their own dead bees he thought the conditions about right, and that none but diseased or old bees would leave the hive if kept dark. Is this not about 5 degrees above the law? I will give you a "brief" of our

CONVENTION REPORT.

We have 23 members, of which 13 were present, and reported 787 colonies, spring count; condition fair. 1249 colonies, fall count; condition good.

Produced, light comb honey - -	2,980 lbs.
" " ext'd " - - -	43,400 lbs.
" dark " " - -	18,450 lbs.
Total - - - - - -	76,130 lbs.

Had the other members reported, I think we could have swelled the amount to nearly 50 tons, as one of the members, I have since learned, had 10,000 lbs. So you see we make sweet enough up here among the basswoods to sweeten up a big batch of glucose, so city folks can eat it. **M. A. GILL, 40,**

Viola, Wis., Feb., 1883. **Sec. P. B. K. A.**

A "CORN-SHELLER" BUZZ-SAW.

I want a circular saw, one for making bee sash by hand power, rigged to a corn-sheller. I have a good heavy fly-wheel, and good speed. I want it for ripping out sash, or suited to a little cross-cut use. Now, what sized saw and gauge will you recommend and furnish? I have a mandrel for one-inch hole.

Parker's Landing, Pa., Feb. 14, 1883. **H. H. SAY.**

Many thanks, friend S., for your novel suggestion. The machinery for running a corn-sheller is just about what we need for a hand-ripper; and although some of the brethren may laugh, I tell you the laugh may be eventually on our side. I wonder now that it never occurred to me before. I am sure the manufacturers of corn-shellers might, by a very little change, give us a hand-power saw at about the same price as a corn-sheller. I would advise about 10-inch saws; and if they could be firmly set on the same mandrel that carries the balance-wheel it would give the best results, I think. This shaft should be about 3 feet long, so that the balance-wheel need not be in the way of long and wide stuff, and the crank would be best near this wheel. With such a machine a couple of good men ought to make hives pretty fast. As the turning would be harder than feeding the stuff, they could change about; or if "orders" were rushing, a third man might assist, and then one could be resting, or doing some light work, about a third of the time. A 10-inch saw, geared so as to have about the speed of a fanning-mill, or a little more, will do very effective work.

HONEY ON THE HONEY-HOUSE FLOOR.

Those who have honey in combs hanging in the honey-house never seem to speak of its dripping, and daubing the floor. Would it not be a good plan to have large square shallow pans to catch the drip? It looks bad to see it on the floor. **A. B. OSBORN.**

Spring Bluff, Adams Co., Wis., Feb. 12, 1883.

You are right, friend O. I would not have honey daubed on the floor, under any circumstances. Our combs are always hung in spare Simplicity hives; and, by the way, are we sure any better comb-closet can be invented than they make when piled one over the other? Well, to keep the floor clean we have for years used shallow tin pans that a Simplicity hive will just stand in. They are in size about 16⅛x20⅜, and the edge is turned up about ½ inch, and soldered at the corners, so the honey never runs out of them. Where the floor was uneven we used to have some trouble with mice gnawing under the bottom of the hive; but with these large dripping-pans, we have a sure thing on the mice. When the pans are not in use under the hives they are nested and set away. In green-corn season they are handy for drying corn. We can make them for 15 cts. each; $1.35 for 10, or $12.00 per hundred, if any of the friends should want them.

A TOMATO THAT BEARS HONEY.

I wish to ask you or your readers if there is any special merit in the Strawberry tomato, or ground-cherry, as a honey-plant. I noticed my bees on the blossoms almost constantly. They bloom when six inches high, and continue in bloom all the season. This plant is quite rare in some sections, although it is a very valuable fruit indeed. I have raised them several years, and esteem them above any other fruit for canning or preserving. Perhaps some of your readers will be interested in a description of them. They are an entirely distinct species of tomato; are about as large as ox-heart cherries, and grow in a pod, or husk. They are of a bright yellow color, and have a strawberry flavor. They will yield wonderfully; are cultivated like tomatoes, and will keep, in their pods till mid-winter, if desired. Now, if it should be that they are valuable for honey, it would be a strong point in their favor. I have saved a fine lot of seed; and if any of your readers wish to try them, I shall be pleased to mail them a package, if they will write to me and inclose stamp. I have kept bees but one season; have had just enough success to feel hopeful. **A. T. Cook.**

Clinton Hollow, N. Y., Feb. 16, 1883.

A NEW WAY TO PUT UP SIMPLICITIY HIVES.

Saw out corners the same as for chaff hives, only use 1½-inch plank, instead of 3-inch. Use 16 screws to a hive. In the fall, when you put your bees in chaff hives, take out the screws, and your hives will be in the flat, so you can pack them away in a very small place.

MOLLY HEATH HONEY-PLANT.

We have a plant three years old; has never blossomed yet; it stands about 38 inches high; the leaves are very handsome. We are keeping it in hopes it will blossom some time. I can't recommend it as a honey-plant, but it looks nice. **D. S. Bassett.**

Farnumsville, Mass., Feb. 12, 1883.

Too much expense, friend B., and too much work to put up and take down. — We have had some nice plants, but, like yours, never seem to blossom.

Notes and Queries.

CHAFF HIVES.

MY bees are all looking rather dirty in the single-wall hives, but look very well in chaff hives. I commenced last spring with 17 swarms, and increased to 38, and sold $100 worth of honey, built in those sections you sent me. If my bees do not all die I shall need some more like them.

Perrinsville, Mich., Feb. 13, 1883. **Wm. C. Herr.**

ONE-FIFTH OF A MILLION LBS. OF HONEY.

My purchases since September, of extracted honey, were over 200,000 lbs. About half or more is sold now. **Chas. F. Muth.**

Cincinnati, O., Dec. 29, 1882.

FROM 7 TO 22, AND HALF A TON OF HONEY.

I began last spring with 7 colonies, and extracted about 900 lbs., and took about 100 lbs. of comb honey, and increased to 22. Last season was the best we have ever had in this part of Illinois. I use a chaff hive of my own make. **G. T. Willis.**

Hoopeston, Ill., Feb. 13, 1883.

I commenced the season with 100 stands, all very weak; took 5600 lbs. extracted honey, and 2000 lbs. comb. Comb honey sold at 15½ to 18 cents; extracted sold at 10 cents up to date, but I have 1000 lbs. yet to sell. This is not a very good location, for there are about 600 colonies within 2 miles of me.

Shellsburg, Ia., Jan. 6, 1883. **Robt. Quinn.**

SWEET-CORN MEAL—A SUGGESTION.

Who has tried Mammoth sweet-corn meal for bees in the spring, to stimulate brooding? We had a small patch, and fed it to some young fowls; never had pullets lay so early, and so abundantly.

BUCKWHEAT IN MISSOURI.

The last of July is the best time to sow buckwheat here in S. W. Missouri. It fruits better, and its poor honey is out of the way, being used for brooding and winter stores. **M. Jerry.**

Purdy, Mo., Jan., 1883.

$18.00 A HIVE.

My last summer crop of box honey averaged me over $18.00 per "skep," spring count.

Romulus, N. Y., Feb. 19, 1883. **John Updyke.**

I started in the spring with 8; have 21 now — two went to the woods, and returned two late swarms. I took 1100 lbs., mostly comb honey, all from upper story. **J. B. Townsend.**

Bedford, Iowa, Jan. 23, 1883.

SAWDUST — SNOW.

If bees winter well in a snowbank, why not if covered with sawdust? **E. Pickup.**

Limerick, Ill., Feb. 9, 1883.

[It *will* do, friend P., only it must be kept dry. Snow is usually dry, you know.]

I made in 1882, beginning with last week in August, and ending second week in Oct., 1882, on an average of 14 hives, $210. I have 15 hives, and my bees average 40 lbs. to the hive; nearly all queens reared from an imported one. **J. C. Baker.**

Paragon, Ind., Jan. 31, 1883.

FRIEND JARRETT'S TROUBLE.

What would a man have done with 100 colonies of bees here last spring, not knowing what a season we were going to have, the average natural swarming being 6 and 7 to the colony, spring count?

West Point, Ia., Jan. 17, 1883. **J. E. Jarrett.**

FROM 3 TO 12, AND 312 LBS. OF HONEY.

My report for 1882. I began in the spring, 3 hives of bees; got 312 lbs. of extracted honey, 95 lbs. of comb in one-pound sections and four-pound boxes, and increased to 12 hives, all in good condition, and plenty of honey to keep them through winter.

Hustisford, Wis., Jan. 20, 1883. **William Seitz.**

One man who keeps bees told me when I told of the large business you did in rearing queens, that there was no such thing as a queen bee. He never saw one, and did not believe anybody did. I told him I hoped to show him one some day.

Everett W. Briggs.

Plympton, Mass., Feb. 5, 1883.

PILING UP THE HIVES FOR SURPLUS.

We had 17 colonies in spring; kept them from increasing by tiering them up 3 and 4 stories high, and took off 500 lbs. white clover, and 700 lbs. choice goldenrod honey, "all extracted." Our 17 colonies are packed in chaff hives. **B. Salisbury & Co.**

Battle Creek, Mich., Dec. 21, 1882.

CARPETING THE FLOOR TO THE PEET CAGES.

The tin slides of the Peet cages may be made less objectionable by giving them a coat of Demar varnish for a sizing, and covering them with flock, the same as sign-writers use. Try it. It is nearest a carpet of any thing I know of. **Alex. Collins.**

Corning, Holt Co., Mo., Feb. 2, 1883.

2000 LBS. OF HONEY FROM 6 COLONIES OF BEES.

I received from 6 colonies, spring count, 2000 lbs. of honey. One stranger I hived made 400 lbs. My hives are from 4 to 8 stories, 12 by 12 in., and 9 high. When I want but one swarm I put the new-hived swarm on the old stand; that settles swarming. My bees worked hard. **S. Hammerschneider.**

Homestead, Iowa, Jan. 27, 1883.

[I should say they did work hard, friend H., and I am inclined to think you did a little of the same too. Eh?]

NEW POLLEN.

My bees are all out to-day, and are gathering pollen. They are going in and out the same as they would in the month of July. Is it something strange for them to be out this season of the year? I went through them yesterday, and they are in excellent condition. G. W. CREE.

Covington, Ky., Feb. 16, 1883.

The mercury is 66° above zero this morning, and I have just examined two colonies of bees. Both are in fine condition, one having brood in all stages. I can hardly miss the honey they have consumed. I have never lost a colony in wintering, and am in good hopes of geting all my bees through the remainder of this winter. J. P. MOORE.

Morgan, Ky., Feb. 16, 1883.

STATISTICS FOR NEW JERSEY.

After correspondence with Dr. Miller, I find that I can best carry out the auxiliary purposes of our association by requesting the fraternity in New Jersey to forward at once their reports, and those of their neighborhood, direct to Dr. C. C. Miller, Marengo, Illinois. Give facts on a postal. Do it now. For N. J. & E. B. K. A. C. H. RUE,

Feb. 12, 1883. Committee.

I began last spring with 30, and increased to 60 swarms, and 1000 lbs. of honey—600 comb, 400 extracted, and have had from 35 to 50 lbs. apiece to winter on. I got 15 to 17 cts. per lb. for comb, and 10 for extracted. This is nothing to brag of, but it is better than a good many have done in this neighborhood, for they have not got a pound of surplus with as many swarms as I have. Bees have wintered well here so far; my 60 colonies are all very strong, and promise well. JULIUS FROSCH.

Elmore, Ottawa Co., O., Feb. 17, 1883.

WHEAT-STUBBLE HONEY, AGAIN.

On the 29th of July, between 4 and 5 in the afternoon, our bees were working on my nearest neighbor's wheat-stubble (where the wheat had been cut two days), so that he was afraid to go through to where he was going to rake, where it had been cut more recently, for the bees were not working there.

A GOOD WORD FOR THE GOOD CANDY.

Twelve swarms are now in the cellar, with plenty of stores, and in excellent condition; two weak ones we are feeding your Good candy, with the best results. It is ahead. EDMUND L. YOUNGS.

Port Crane, N. Y., Jan. 4, 1883.

Bee Botany,

OR HONEY-PLANTS TO BE NAMED.

SNOWDROP — SYMPHORICARPUS RACEMOSUS.

INCLOSED find specimen flower-stem, and flower, of a shrub that is grown to some extent in this section, as a dooryard ornamental shrub. It grows from 4 to 6 feet high; the leaf and habit of growth very much resemble buck-bush, only of larger growth. The berries or fruit are white when ripe, and about the size and shape of cranberries. The name it goes by here is snowdrop. My attention has been directed to it for the last three weeks, as a honey-producing source. I think it equal, or nearly so, to basswood. Perhaps it will not yield honey in as large quantities as the basswood; but as it remains in bloom so long, I am inclined to think that a larger amount of honey could be collected from an acre of this shrub than from an equal amount of basswood. It bears honey from early morn till late in the evening. The bees fairly fight over it. Can you give the specific or botanical name, and any information as to its value as a honey-shrub? R. B. ROBBINS.

Bloomdale, O., June 26, 1882.

The plant is the *Symphoricarpus racemosus*, Mx., commonly called snowberry. It grows wild on rocky banks and is quite largely cultivated as an ornamental plant. The flowers are white, or slightly rose color, and are produced all summer. I have observed the bees working upon the bushes grown in this vicinity. There is another species, *S. vulgaris*, which has small dark-red berries. This latter is frequently called coralberry, or Indian currant.

W. R. LAZENBY.

Ohio State University, Columbus, July 10, 1882.

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

IT is bad enough to be told there is a patent on using hives two story, or on using any kind of a division-board; but now our old friend H. H. Flick just wakes up to the fact that he has a patent on all wide frames for holding sections, and has had all along. Here is one of the circulars, such as he is sending out, to scare innocent unsuspicious bee-keepers into buying supplies of him, or "speedy satisfaction" will be demanded.

NOTICE TO
BEE-KEEPERS AND SUPPLY DEALERS.

Bee-keepers are respectfully informed, that I am the *Inventor* and *Patentee* of the double or broad frame for holding inside frames or sections, together with the section, for surplus honey; and that nearly all Apiary supply manufacturers and dealers are infringing on my patent, dated September 21, 1869, and ante-dated September 8, 1869, No. 95,100, which fully covers both frames in question.

Bee-keepers are advised not to use, or buy from manufacturers or dealers in Apiarian supplies, who are not licensed by me under said patent, as all persons infringing on said patent are liable for damages.

The law will be enforced in all cases of infringment, unless speedy satisfaction is given.

LAVANSVILLE, PA. }
Somerset Co. } H. H. FLICK.

Many of our older readers will recognize the man as the one who took a recipe for artificial honey out of Dr. Chase's Recipe Book, and then, by means of a great spread-eagle advertisement, sold it for three dollars or such a matter. Mr. H. H. F., if you want us to keep your name standing right along in Humbugs and Swindles, just keep sending out those little circulars. As there is no date on the little paper, we might think it was a thing of a long time ago; but complaints and inquiries are coming from different directions.

Our Homes.

Ye are my witnesses.—ISAIAH 43:10.

SOME years ago our kind pastor, Mr. Reed, of whom I have before told you something, was conducting a series of meetings among us; and during their progress he made a remark something like this: That if the Christian people, or if even the members of our own church, would turn out to our regular evening meetings, the ungodly, and those who are open scoffers, the intemperate, and the deliberately wicked would come too. He furthermore said, that if the church people, when they got there, would stand up and testify, or bear witness to Christ's saving power, a revival would follow, and sinners would be converted.

Before going further, I wish to stop a minute. What is a revival? and what is "converted," as we Christian people understand it? Dear friends, I can remember very well the few short years ago when I used to stick up my nose, as it were, and say, "Oh pshaw! it fairly makes me sick to hear people talk such foolishness." I wonder if there are any who feel any like it now. If so, it is to them I want to talk. Intelligent people mean nowadays by "conversion," being revived up, and shaken up, to new and better impulses. If there are in your neighborhood people who are not square in deal, and you know it, you know that a revival of good impulses and purposes is needed. If you have people who are selfish, and who say one thing one day and another thing another because the latter happens to suit their purpose better, you know again that something to make people feel that it is before God they stand and act and think, would be a grand good thing, and so on through all the whole category of sins. Did you ever feel the need of some friend whom you could be sure was always right — never evasive or querulous, or known to give as an excuse for the evasion of duty, any thing that was not just the plain square simple truth? If so, did you ever find one? and do you know what it is to thank God for having sent you a friend who is always, and under all circumstances and provocations, thoroughly honest before himself and God? If you can appreciate such a virtue, have you yourself got it? If you are honest enough with yourself to own up you haven't, you can probably understand the need of a revival in your own heart. "Create in me a clean heart, O God, and renew a right spirit within me." Well, if the people about you need a revival, and you need one too, there is no further need of discussing the matter. Our pastor told us it would come, if the church people would only come forward and act up to their convictions. A friend thought he was a little rash in saying a revival would *surely* come, for how should he know positively?

There are, or, perhaps, I should say there were then, say 250 enrolled members of our church. It doesn't seem as if it would be a very difficult matter to get them all to come to these extra meetings, or, at least, practically *all*, for just a few evenings; and then, in view of the great good that was to be accomplished by getting rid of a lot of the sin of the world, or, if you choose, a lot of the ugliness in the world, it doesn't seem as if it would be very hard to get them all to stand up, one at a time, and testify to the fact that they knew of, and had had some experience, of the troubles made by sin, in order that we might unite our voices, and may be also our hearts, against this common enemy and foe to the happiness of mankind. Well, why should they not all come, in response to the invitation and express request of the pastor? Perhaps you would like to know how many did come. I can not remember now, but I think not more than 30 or 40. When individuals were talked to about the matter, they all insisted it was not their particular selves who were wanted. "Why, Mr. Root, do you really think it *could* do any good if *I* should go?" And thus it was that they made excuses, and refused to believe that any particular good could come from such a little simple thing as going to meeting, and standing up among the rest, and saying they were anxious for a deeper work of grace in our community.

One excuse for declining to "bear witness," as it is commonly termed, was because everybody knew already that they would do any thing for a revival in our town, and for the upbuilding of purity of morals, and uprightness of heart.

Have you noticed that I have had quite a fondness for telling what "*they*" did, or *they* said, all along? One would naturally infer that *I* went right along and stood up and bore witness, and did every thing that ought to be done, all right.

It is true, I did attend most of the meetings, and I usually took part, in some way; but I am sorry to say that I did it more because I loved my pastor, and wanted to assist him in any way I could, rather than because I had much real abiding faith that a general reform in our town would result from such a comparatively simple thing as having all the church come forward and bear witness. He explained to us, in the many kind sermons preached during those days, that it is not only those who live perfect lives, whom God wants to bear testimony, but especially the ones who feel discouraged because they make such poor headway in trying to lead Christian lives. "Just as I am, without one plea, but that thy blood was shed for me." It seemed almost in vain that he pleaded. The church wouldn't come, because they didn't *believe* any such simple act on their part was going to bring any great general good. I am sorry to say, that, although I came, *I* didn't believe very much that going to meeting and confessing myself a failure, in one sense, in what I knew I ought to be, would have any effect in stopping the blasphemy that emanated nightly from the saloon I passed on the way.

I had read where David said, after asking God to give him a clean heart and a right spirit,

> Then will I teach transgressors thy ways; and sinners shall be converted unto thee.—PS. 51:13.

But I did not believe it, or at least I did not realize that it applied to me as well as to David. The meetings for the winter were closed, and our disheartened pastor not very long after bid us a sad adieu, and accepted an offer to labor in a new field. Although a few during that winter started in the service of the Master, I presume many thought "the attempt to get up a revival," as they expressed it, was a failure. Was it a failure?

My mind goes back especially to one of the meetings that winter. There were but a few there, and mostly young people, or those but a few years on the Christian pathway. Our pastor again spoke of the importance of all taking a part, and remarked, with great emphasis and feeling, that if every one present, in just this little meeting, would stand up, or take part in prayer, a blessing would surely follow. For once it seemed his little flock were ready to stand by him; and although my faith was weak, and my thoughts probably much on business as usual, as one after another began to tell of their trials and successes in the straight and narrow path, I began to shake off my half-heartedness, and to enter fully into the spirit. Among the rest who spoke was a convert from our county jail, of whom I have told you. What he said was in substance something like this:—

"My friends, I can't stand it to sit still any longer. I must speak. I am not making the progress in Christian life I should make. I am very much of the time sadly discouraged, and almost ready to give up; but for all that, I love to be among Christian people, and I want to follow the Savior. I need your prayers; friends, remember me."

Do you wonder that these few words roused us up? It was as if some one who was out that winter night in cold waters, amid blocks of ice, had sent a pleading cry to us. Would we pray for him? The thought in many a heart was, "Why, God bless you, dear old friend, to be sure, we will pray for you, and help you by every means in our power." It had been whispered, that his religion had of late grown somewhat cold; but did any one there feel less inclined to pray for him on that account? Was there one there, think you, whose religion had not at some time grown cold? If I remember, every one gave witness in some way of the need of a Savior; and when the meeting closed we were "with one accord," like the disciples on the day of Pentecost, shaking hands, and showing in our looks that we felt a sincere kindness and good will toward each other we had not felt before. If any present had before felt a disposition to dwell on the infirmities of some other brother or sister present, the disposition was gone; and for the time, at least, he felt ashamed of it. I am pretty sure that every one present at that meeting made a marked step in the way of a better life, from that time forward. There were present, at the time, a young married couple who united with our church at about the same time I did. These two, although faithful in the performance of all church duties, and regular attendants at most of our meetings, had never taken any very active part in Christ's work, nor had they seemed as full of the Spirit as some who had more heart in the work. At about the time of these meetings, or perhaps at this very meeting, these two friends seemed to wake up, and put on a new spirit of earnest devotion to the Master's work that was almost like the experience of a new convert. I noted the bright earnestness and joy in their faces, and, in my want of faith, wondered if it would last. It has lasted, dear friends, although years have passed since then. They have had some trouble, and been at times discouraged; but they have never, I am sure, been back where they were before those meetings. It has been my privilege once to cheer them in a time of trouble, and to hold up God's promises before them; but it was a far easier task than it is with those who have never known Christ's great love for sinners. Not only were these friends bright, and full of faith in our meetings, and in our Sabbath-school, but it goes through all their lives. "Ye are my witnesses;" and no one who has known them can well help seeing that their every-day lives are indeed a witness for the Master.

Those who attended that meeting, or the meetings of that winter, have been a sort of little band of earnest Christians of themselves, ever since. Every Thursday evening, and every Sunday evening, you will find them promptly on hand at the young people's prayer-meeting, and that, too, almost in spite of cold and storms. Not only have they been in attendance, but their voices, as well as their lives, have continually borne witness. The result has been, that the attendance has increased year after year, until we now have, instead of the dozen that used to come, an attendance of from fifty to a hundred. It seems a little strange to me now, to think of young people being attracted to a prayer-meeting; but it is nevertheless so, that our boys and girls, of almost all classes, now as a rule gather there regularly. They go, because the educated and intelligent young people of our town are sure to be there, and the meeting is mostly kept up and carried on by those of their own age who testify and bear witness to the cause of Christ. The time was when one who joined the Church would meet with sarcasm and ridicule among our people; but the influence and testimony are now so strongly on the other side, that he who gets up in these meetings and declares his intention and purpose to give up vain pleasures, and live for God and his fellow-men, meets with kind words and encouragement instead.

Through winter and summer these meetings were attended with zeal and interest; and although there were perhaps seasons of comparative dullness for a time, it was pretty sure to be followed by a stepping upward again pretty soon; and while I would by no means speak disparagingly of the weekly prayer-meeting for elderly people, it was manifest to any observer, that among our younger ones there was a brighter and more practical faith, if that is the word for it. I am now among the elderly ones, you see, and I have often felt rebuked for the want of zeal and interest I felt, as I came into their midst.

Well, shortly after the week of prayer, but a few weeks ago, our pastor, feeling that the interest warranted it, called for special meetings to be held. Many came out; a few arose, and I felt that the work was doing at least tolerably well.

One evening after the meeting I said as much to him; but to my surprise he seemed in trouble. Pretty soon it came out.

"Brother Root, I am very much discouraged; yes, terribly discouraged. I am discouraged because of the indifference of our church. It is now a critical time with us; our town is full of a healthy interest on the subject of religion. Business men have called to see me and talk it over, and I am frequently accosted on the street, relative to the matter. Our young people are discussing and deciding, and great numbers are ready for the question, What shall I do to be saved? Through it all it seems as if the most indifferent class of people were the members of our church."

I suggested that we had a large attendance each Sabbath.

"Yes," said he, "they come to hear my sermons; and although I tell them what we want with all the power I possess, they nearly all seem to think it doesn't mean *them;* and at this critical time, when we want all the influence that can possibly be brought to bear, both in attendance and taking part, they stay away."

My good earnest friend had roused me up some by his little sermon (which I may not have given just as he told it), and I not only went myself, but gave all of the shop hands a pretty earnest invitation at the noon service. After the short sermon I was almost a little startled on seeing a young man arise and acknowledge the wrong position in which he stood, and ask prayers. He had formerly worked for me, and I knew him well. I wanted to get near him, and tell him how we all rejoiced, but he was gone before I saw him. On my way home in the darkness I heard two talking earnestly. It was before the residence of our old friend "M.," who is now assistant editor of one of our county papers. The new convert was bearing witness already, with earnestness and power. One remark he made was this, in substance: —

"Friends, I have not been right, and I knew I was not right. I have been dissatisfied all along, for I knew my influence was on the wrong side. I have made up my mind to-night, that this thing shall be so no longer, and I feel happy over it already."

There was no need for him to say he felt happy, for it was evident in every word of the earnest tones in which he spoke. My friend, are you sure your influence is not on the wrong side? is your life bearing witness on just the side you know it ought to be? You can not urge that you don't take sides at all. A silent witness is a witness against the cause that is up prominently before the people. Ye are my witnesses. As he finished, M. spoke: —

"I tell you, friends, *I* have not been what I ought to be. I am full of business, as you know, and I have excused myself from attending the meetings on this account. But just let me give you an illustration: A few weeks ago the factory hands had a sleigh-ride, and asked me to go. I had more letters to answer that night than usual; but my wife and I both went to the sleigh-ride, and we got home so late that I got up at four o'clock in the morning and went up to the office and finished my writing. Have I ever done that for the sake of going to meeting? No; but I tell you, friends, I am going to do better."

He did do better, for he came to meeting and got up and confessed his past half-heartedness, and asked the prayers of the rest of the young people. As he sat down I breathed a "thank God," and felt in my heart that here was surely good solid work being done for our town people, and for the Master.

After the young convert left us that evening he went home to his boarding-place and told the people there of his new resolve; and when one of our factory boys came in shortly after, he told him also, evidently feeling happy at every step in the work of bearing witness. It came with the greater power from him, from the fact that he is usually of a quiet and reserved disposition; for everybody knows, who hears him speak, that it is "out of the abundance of the heart that the mouth speaketh."

The spirit of these meetings has gone all over and through our town. It has reached us here in the factory, and has lightened my cares in a way that none but God, to whom I have gone so often pleading, can know. There has been no excitement, and nothing in the least approaching what might be termed loud talk, even; for the greater part of our young people are educated and intelligent, and their testimony is given in words only loud enough to be heard distinctly. While their faces are for the most bright and cheerful, they seem to be so fully aware of the solemnity of such meetings, that we have the most perfect order. When one rises who is just seeking a better life, an almost breathless stillness pervades the room, that we may catch even the faintest word he utters. Something like forty or fifty have come forward within the past few weeks, and more than half that number have applied for admission to the Church. This is not all. Our old members have been revived, and made bright and hopeful, and voices have been heard in prayer around the family altar that for years have been silent. Hard feelings and unpleasantnesses have melted away like frost before the morning sun, and a neighborly disposition to help each other has come into many a heart, and a broader generosity has taken the place of narrow and selfish feelings. I make this last observation mainly from personal experience. My faith is brighter, both in God and my fellow-men. Reader, are you, and is your influence to-day on the *right* side? and if so, are you seeking first the kingdom of God and his righteousness with all your might, soul, strength, and mind? Remember, the Master said, "Ye are my witnesses."

Whosoever therefore shall be ashamed of me and of my words, in this adulterous and sinful generation, of him also shall the Son of Man be ashamed, when he cometh in the glory of his Father with the holy angels.—MARK 8:38.

Tobacco Column.

I JUST laughed until I cried, over your experience on the cars, going to the convention. Now look here, old friend "honest Indian," had you not been taking some simple kind of beverage with a brother bee-keeper? Perhaps it was taken through an honest-looking "straw," and "just a drop" to keep out the cold, eh? I have heard the argument of using tobacco, until I am at times tempted to try again to quit using it. But, oh, what's a fellow to do at night while musing over his expected tons of honey, unless he smokes tobacco? I can say this much for tobacco: It has, many and many a time, kept me out of other "devilments," and I for one say, "Remove the tariff; Messrs. Commissioners, give us *cheap* tobacco and high whisky." Besides, dear friend, remember I am a "tar heel;" and when you take the pipe and tobacco from us, "we'uns" are going to make trouble; and don't fail to remember this. R. C. TAYLOR.

Wilmington, N. C., Jan. 19, 1883.

Friend T., we are not going to *try* to take the pipe and tobacco away from you. If you give it up at all, it must be, not by might, not by power, but by the spirit of Jesus our master, and then there won't be any trouble. In regard to your small plea for tobacco, I fear it is not always the best thing to do, to "muse over expected tons of honey." Tobacco may, for the time being, have kept you from doing something worse; but are we to give a big strong man like you something to do, with the simple idea of keeping him out of mischief? Why, friend T., you should be saving souls, instead of musing and smoking, should you not?

THE TOBACCO COLUMN; WHAT ONE OF OUR NEW FRIENDS THINKS OF IT.

I am much amused with your Tobacco Column. You must be a remarkable man to take so much interest in the tobacco-slaves (I am sure there are none like you in this section of country) as to give a smoker as an inducement to quit. Now, don't think that I want you to give me one, yet I *have* quit the use of tobacco. I will tell you about it. I don't take any pride in saying that I was an inveterate tobacco smoker and chewer, but I am glad that I have had nerve enough to quit. Well, as nearly as I can recollect I commenced when I was only about 9 years old, and used it about 36 years. There were few who used more than I did. After using it all day I would often get up in the night to smoke. Well, on the 22d of March, 1879, I *quit;* have not touched, tasted, nor handled the dirty stuff *since.* Well, do you think it was easily done? Not much. It was a hard battle; it was advance and retreat for many weeks; but I fought it out, and conquered. I think the trouble with many is, they will quit four or five weeks, just long enough to get into the thickest of the fight, and then surrender; when, if they would hold out a little longer, they would conquer. I think that a man who stops using tobacco should, as much as possible, keep away from people who use it, for a while, and not tempt the appetite. When I stopped I kept away from public places all I could until I began to get weaned from it. Now I am free from tobacco as well as whisky. J. MCKEON.

Dryden, Tompkins Co., N. Y., Dec. 18, 1882.

By the way, friend M., it seems to me you make a pretty good point where you speak about keeping away from public places. A part of the Lord's prayer is, "Keep me from temptation." When you were keeping away from public places, were you not getting better acquainted with your family, and fulfilling your mission better, as a Christian and a father? I am glad to hear you tell of your experience; for such encouraging words are contagious, and I shouldn't be a bit surprised to hear that some other brother had just "gone and broke off," simply from hearing you tell of it.

And now, friend Root, a word for the Tobacco Column. I have used the weed about fifteen years, and now I am ready for the smoker. It is rather humiliating to have any one hire me, and to do what I know to be right; but I feel that, if I made an agreement with you, or any one else, I have honor enough to stand by it. I know it will be a hard job to break off, but I believe my word of honor is stronger than my appetite for tobacco; if, however, I can not quit, I promise to pay you the price of two smokers. H. H. PEASE.

Kingsville, O., Feb. 17, 1883.

One word about tobacco. I don't use the weed; but had I not seen your Tobacco Column I think I should have tried it, for Mr. Quinby recommends it strongly; but after reading what I have in GLEANINGS I should feel ashamed to take up the habit for that purpose, when 75 cts. buys a good smoker.

Plympton, Mass., Feb. 5, 1883. E. W. BRIGGS.

HONEST AND CONSCIENTIOUS, BUT "COULDN'T HOLD THE FORT."

Inclosed please find $2.75. Please send me GLEANINGS one year. The rest, $1.75, will pay for smoker on Tobacco Pledge. F. W. SMITH.

Parksville, N. Y., Dec. 27, 1882.

"Remindery,"

Or Department for duties to be attended to this month.

DON'T have any robbing in or about your apiary. Robbing is a disgrace to the community, whether among bees or men. You ought to be ashamed of it. You ought to be ashamed of yourself, if you have neighbors who rob, or neighbors' bees that rob. Set a better example, and take temptation out of the way. See that the neighbors, the neighbors' children, and the neighbors' bees are busily employed about something honest or useful. You are your brother's keeper, to a certain extent. Don't let your bees lack stores. Mrs. Axtell thinks they build up better where they can see that they have a great lot of stores ahead. I shouldn't wonder if she were right. Where you haven't extra combs of sealed stores provided for spring encouragement, give them Good candy over the cluster. Our girls knead it as they would dough, and it can be made into nice little round biscuits, to be placed right over the bees. You might work in some flour, if they are short of pollen; but where there is plenty of pollen in the combs, I don't believe it will be of any advantage. *Too much* brood started very early is sometimes a detriment.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, MAR. 1, 1883.

> But if the wicked will turn from all his sins that he hath committed, and keep all my statutes, and do that which is lawful and right, he shall surely live, he shall not die.—EZEKIEL 18:21.

THE drawing of friend Walker's case for comb honey came too late for place in this number.

THE last time our bees flew we had lost about 25 out of 185.

WHEN you write in regard to something that has previously appeared in GLEANINGS, please give page and volume.

ALTHOUGH we are turning out two fdn. mills now almost every day, we are still about 20 mills behind on our orders.

FRIEND J. H. Martin sends a bee's tongue register, considerably improved and simplified, compared with what it was a year ago.

WE have now on our 35-cent counter a very pretty little oil-stone, set in a mahogany box. If wanted by mail, 5 cents extra. Price of ten, $3.00; 100, $28.00.

WHEN we send you an estimate on goods, always return this estimate when you order, or at least mention that we gave you an estimate. If you neglect to do this, I can not be responsible for the errors that may accrue in consequence.

WE have received two numbers of the *New-England Apiarian*, and it surely promises well. The work is neatly done, and the articles seem to be well chosen. It is published by W. W. Merrill, Mechanic Falls, Maine. Success to you, brother Merrill.

WE want catnip seed, horsemint seed, spider-plant seed, figwort seed, white Dutch and alsike clover, and, with the present demand, we are likely to need about every kind of bee-plant seed known. Have you got any? and what do you want for it? Send sample, and give price.

WE have just had a call from our friend M. D. York, Millington, Mich. Among other things, friend Y. said he wanted to thank me for having, through the influence of the Tobacco Column, got him to give up tobacco. He doesn't look as if he had suffered any harm by the break-off.

ALL the time some of the friends are wanting to buy the rolls only to our fdn. mills, saying they can make the frame themselves, and thus save money. You can't do it, friends; the rolls are the expensive feature of the machines, and you could not begin to make the frame at the price we do.

WE are just about out of *real nice* clover honey. We have quite a quantity of beautiful clover honey, light and thick, but it doesn't sell, because it is tainted a little with goldenrod, or some other fall flowers. If you want your honey to bring the best price, don't let a particle of fall honey get mixed in with it.

AFTER we had got a nice trade started on bell jack-screws, the manufactory broke down, and we had to send to another place and get a higher-priced one. By buying a whole gross we were enabled to get them so they are only 25 cts. more; but do you not see, dear friends, how absolutely impossible it is for us to entirely avoid changing prices?

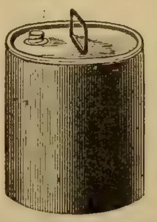
MUCH matter is crowded out, and to-day "Barney" says there isn't "a spec of room" left for Doolittle's article, and another from one of his neighbors. If you don't stop giving us so many ads., and such a subscription list, I don't know but that we shall have to enlarge the JUVENILE again, and give the old folks a corner of it.

WE have bought all the wax that has been offered, and have paid for a nice article as high as 35 cents cash, and now I know of no more for sale anywhere at any price. In view of this we shall advance the price of fdn. 5 cents per lb. On all orders that reach us after the 15th of March. I really hope there is wax that will be thrown on the market at this price, and that further advances will be unnecessary.

IN trying a new fdn. mill, have the rolls warm enough so they do not feel cold to your hand. Have the sheets of wax at such a temperature that they will neither break nor be too soft. When they are leathery is about right. Do not use a large piece of wax at first trial; for if it sticks to the roll, you will not have so bad a job to get it off. Do not let any wax get into the rolls unless the rolls and wax too are well lubricated with starch. When you get every thing just right, the wax should almost run out of itself.

SOME MORE TINWARE.

WE thought we had got already every sort of package one could possibly ask for; but I found the makers of maple-sugar implements had such a neat molasses can, I felt we must have it for honey. You see, any sort of pail, unless the lid is soldered down, or closed with cement, is unfit for shipping honey, unless it is candied very hard and solid indeed. With this the package is safe from leakage. But another point comes in: Maple molasses, as well as honey, is a little tempting to the boys who handle such freight; and, to make matters safe, we always solder a little slip of tin across the cap, and then catch it on the pail. If it is meddled with on the way, it is plainly evident, when the consignee receives his goods.



OUR 15-CENT GALLON HONEY-PAIL.

SELLING RECIPES, ETC.

SELLING information is, I believe, generally conceded to be an honorable business, providing you give, in return for the money you receive, "value received," or, in other words, if you receive a dollar, or five dollars, you are expected to give a treatise, or book on the subject, such as usually sells for about a dollar, or five dollars as the case may be. But charging a dollar, or several dollars, for information that can be written or printed on a little bit of paper, or even in a small pamphlet, is not only behind the times, but hardly in accordance with the spirit of our modern institutions. We not only can not accept advertisements for any thing in this line, but I should not want to do any advertising for a man in that kind of business, lest he might send our customers circulars, urging them into such investments. I think it will be safe to class all such offers as little better than swindles; and if innocent persons have got into any such business, they will have to suffer for being found in bad company.

We have already 5000 subscribers and 46 over, and it is only March first. Don't you think that is doing pretty well?

The bees are flying to-day (March 1st), and we find so many weak we should like to dispose of about a dozen queens, as follows: Three hybrids at a dollar each; eight or ten tested queens, at $2.00 each. Safe arrival guaranteed. Selected and imported queens at catalogue prices.

We can not, at present, agree to take queens of anybody. The demand and supply is so uncertain, and the property so perishable, that the best I can do is to tell you when we are in need of them. Work up your local trade near home, and it will be much better for all of us than sending the poor little pets thousands of miles through the mails.

Friend Pelham, of Maysville, Ky., has developed our old idea of making fdn. by means of dies cast of type metal, and offers a 10-inch mill for only $15.00. The fdn., however, has an unnatural base; but this, he thinks, will not hurt it. It seems to me it must take the bees longer to work the cells into shape; but a practical test in the hives may show he is right. His samples are very handsome to look at.

DIPPING SHEETS FOR FDN.

Make your dipping-boards of thin maple, about 30 inches long, and have your dipping-boiler about two feet deep. Use boards without any handle; and after you dip once, turn it end for end, and you will have sheets of about uniform thickness their whole length; and after they are rolled, one sheet will make two sheets of fdn., to fill wired L. frames. It saves labor in dipping and labor in rolling, and we can now furnish you fdn. of an even thickness, 35 inches long, if you want them so. We have found that dipping-boards of seasoned hard-maple stand the water better than either whitewood or basswood.

MACHINERY FOR FRAME-MAKING.

Several have inquired how we make the notches in the top-bars for all-wood frames, and for the top-bars to wide frames. We long ago discarded cutter-heads for this purpose, because they dulled so quickly, and we now do it by means of saws clamped closely together on the mandrel. We use as many ordinary grooving saws as are needed to get nearly the required width of the groove, or channel, and then put a thin cut-off saw on each outside. The cut-off saws cut off the wood square and smooth, and the groovers then rake out the wood. For grooving lengthwise with the grain, the cut-off saws are not needed. The expense of sharpening saws is but little more in the end than for cutter-heads; and having so many more teeth, they do a far larger amount of work without re-sharpening. For the groove in the all-wood top-bar we use only one groover, with a cut-off saw each side of it.

FRIEND SHUCK, AND HOW HE DID IT.

SEE P. 86, FEB. NO.

You say, "We should like to know all about how you do it, if you will be so kind." Certainly; but it would make quite a lengthy letter, to give all the details, so I will tell *how* it was done, and leave out the details.

I had about 200 extra combs, and used 25 lbs. of fdn. I use the Simplicity form of hive, and worked my bees for all the honey I could get, increasing only to prevent natural swarming. This, with the working qualities of our bees, and the favorable season, is the key to our "good luck." Striving to prevent natural swarming hindered our obtaining a "big" yield from any one stock. The largest amount of extracted honey from one stock was 228 lbs. The most from one stock, in comb, was 157 lbs., and 32 lbs. extracted. One stock, occupying only 4 L. frames June 1st, with a 3-year-old queen, superseded their queen July 10. I sold the young queen and 1¼ lbs. of bees from it July 20, and gave them a laying queen next day, and obtained 136 lbs. extracted and 23¾ lbs. comb honey.

Another stock occupying only 3 combs gave bees and brood for 2 new stocks; was without a laying queen from Aug. 2 to Aug. 29, and gave 101 lbs. extracted and 23¾ lbs. comb honey. A stock occupying only 4 combs, without any increase gave 133¾ lbs. extracted and 44½ lbs. comb. The poorest of the 30 original stocks was a one-frame nucleus, and queenless June first. The queen hatched, June 7.

July 8 I gave them ½ frame of hatching brood. July 17 I took 4¼ lbs. extracted honey, and Sept. 26, from an upper story I obtained 29¾ lbs. extracted honey.

During the last week in May, most of these nucleus colonies were robbed of all their brood, except one comb each, for the purpose of strengthening full stocks, or those that were nearly full; and to my surprise, at the close of the season the nuclei were but very little behind in the amount of honey produced—those to which the brood had been given.

S. A. Shuck.

Bryant, Ill., Feb. 7, 1883.

The above would seem to cast a doubt on the advisability of taking brood from one stock or nuclei, for building up others; but I supposed that, even if the stocks helped were not much benefited, the nuclei would certainly be weakened, and injured for honey-storing. Friend S. does not seem to have found this the case, however. Does it really pay, friends, this taking bees from one colony to another, and upsetting the regular order of things?

BYRON WALKER'S IMPROVEMENT IN SECTIONS.

ALSO SOMETHING ABOUT GETTING READY BEFORE THE SEASON IS UPON US.

The letter of Byron Walker, containing my testimonial, with your comments on it, occasioned me some surprise. Had I known what use Mr. Walker intended to make of my testimonial, I am not sure that I would have given him permission to use it as I did. I supposed he wanted it for his own circular, instead of publishing it in Gleanings. It is true, that I like his sections the best of any that I have used, but it is too much to ask you to publish a letter recommending another man's sections. I was somewhat astonished at first on reading that I had complained of Friend Walker's sections, as I did not remember having mentioned them. I recollect thinking that I would write to you about his improved groove, and I suppose I must have said something about his sections, though I do not now remember what it was, as it was probably written in a hurry during a very busy time.

I received the first of these sections about the middle of the summer, taking them in exchange for queens. For some time I did not like them, as I thought it took too much time to nail them. Many of the next lot of sections I received from you, however, had shrunken so that they had to be nailed. This was at the time when you were so crowded on sections; and when I came to take the sections off and crate them, I appreciated the extra stiffness that the nailing gave.

I think, however, the angular groove is the best feature of friend Walker's section; and if your sections were made of well-seasoned wood 5-32 thick, with this groove, they would be preferable to the nailed sections, unless they were to receive very rough handling. I have not abandoned your section yet, as I have already ordered of you 5000 half-pound sections, and will order more of the regular size next week.

While I am writing on sections, I want to advise everybody to be sure to have enough — yes, *more* than enough, of all necessary supplies before they are needed. I am quite certain that I lost at least $500 last season by not having sections, frames, fdn., etc., when I needed them, and I know of other bee-keepers who lost even more, proportionately. I do not intend to be caught so again, you may depend on it.

Dayton, Ill., Feb. 13, 1883. J. A. GREEN.

Friend G., I rather enjoy publishing letters that recommend other men's goods, when I really think they are better. It goes a little against the grain, it is true, but I always feel "good" after it. We are adopting the improvement, and will report after a little. I highly appreciate your concluding remarks, for I do feel sorry for those who want supplies and can't get them.

CONVENTION NOTICES.

The spring meeting of the N. J. and E. Bee-Keepers' Association will be held in New York, at Cooper Union, March 14, 1883. J. HASBROUCK, Sec.
Bound Brook, N. J., Feb. 21, 1883.

The Eastern Michigan Bee-Keepers' Society will hold its annual meeting in Detroit, April 3, in Abstract Hall, commencing at 10 A. M. An interesting meeting is expected, and bee-keepers are invited to send items, or questions of interest, to the secretary in time that they may be announced previous to the meeting. All bee-keepers invited.
Detroit, Mich. A. B. WEED, Sec.

The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol Building on Tuesday, April 17, 1883, at 9 A. M. Programme: President's address, Prof. A. J. Cook; Wintering Bees. Essays: S. C. Perry; The Chaff Hive. C. Case; Comb Honey. O. S. Smith; The Best Bee. A. D. Benham; Extracted honey. M. Harper; Queen-Rearing. Mr. Waldo; Best Method of Wintering outdoors in Single-Wall Hives. E. N. Wood; Sections. E. Greenaway; Comb Foundation. All bee-keepers are invited to attend, or send essays, papers, implements, or any thing of interest to the fraternity. A full attendence is requested of all who are interested. E. N. WOOD, Sec.
North Lansing, Mich., Feb. 19, 1883.

CIRCULARS, ETC., RECEIVED.

J. B. Mason, Mechanic Falls, Me., has sent us his price list of bees, queens, etc. It is neatly arranged and printed, 28 pages, 5½ x 3¼.

From Will A. Hammond, Richmond, Va., we have received a one-page list of bees and queens. In the middle is a large queen printed in yellow, looking decidedly life-like. If for no other reason than to see a specimen of printing which is a delight to the eye, send for this.

Merriam & Falconer, Jamestown, N. Y., have just mailed us their catalogue of 24 pages. It is profusely illustrated, and presents many points of interest. The printing is very good. One of the best features about it is an index.

J. Luther Bowers, Berryville, Va., sends us a nice 4-page list of bees, queens, etc.

Narmore & Wood, North Lansing, Mich., have sent us an 8-page price list of apiarian supplies. The printing is of a decidedly "amateur" cast.

E. B. Beebee, Oneida, N. Y., has sent us his 16-page price list of bees and apiarian supplies, nicely illustrated. It is well printed, and will pay perusal.

We have just printed for A. D. Benham, Mt. Olivet, Mich., a 4-page price list of bees and queens, and general supplies for the apiary.

Friend I. R. Good's postal-card circular was overlooked accidentally last month. It includes Italian and Holy-Land bees, foundation, etc.

Henry Drum, Adelphi, O., has sent us his fifth Annual Circular and Price List of apiarian supplies; 8 p., 4 x 8.

Jas. O. Facey, New Hamburg, Ont., Can., comes to the front with a neat 4-page price list of nearly every thing pertaining to modern apiculture.

MRS. LIZZIE COTTON'S CIRCULAR.

I am being asked my opinion of the new circulars Mrs. Cotton is again sending out quite plentifully. The statements she makes, and the prices she charges for the goods she sends out, would, in my opinion, forbid her being classed with our regular supply dealers, to say nothing of the strings of complaints against her that have filled our bee journals for years past.

SEND 10c for a package of BLACK or YELLOW LOCUST SEED, postpaid. Address
CHAS. KINGSLEY, Greeneville, Tenn.

For Sale. BUZZ-SAW, Barnes scroll attachment. Price, $25.00.
3-4d J. H. COLVILLE, Goshen, Clermont Co., O.

OSAGE HEDGE PLANTS FOR SALE
At $2.50 per 1000; Honey-Locust, $3.00.
Sent to any address on receipt of price.
R. J. FISHER, 3-5d
NORTH RIDGEWAY, - ORLEANS CO., - N. Y.

CHEAP BEE-HIVES.
Orders filled on short notice. All kinds of Bee-Hives, Honey-Boxes, and Frames made to order.
Address THOS. A. GUNN,
Tullahoma, Coffee Co., Tenn.

FOR THE
OLD RELIABLE
BEE-SMOKERS
or Uncapping - Knives,
Send card for circular to
BINGHAM & HETHERINGTON,
ABRONIA, MICH. 3-6d

FOR SALE.—Sixty colonies of Italian Bees, in 10x11 Gallup frames, with fixtures, $6.50. If taken at my apiary, $6.00.
3d JULIUS FROSCH, Elmore, Ottawa Co., O.

IF YOU WANT A
HORSE POWER,
Don't make or buy one until you have sent for a Circular describing the WARREN POWER, to
3d W. C. GILLETTE, LeRoy, Genesee Co., N. Y.

WARRANTED ITALIAN QUEENS, from hardy improved stock, $1.00 each; from imported mothers, 50 cts. extra. Satisfaction guaranteed. None of the new races kept in this vicinity.
2-7 W. H. PROCTOR & CO., Fairhaven, Vermont.

GIVEN'S
FOUNDATION PRESS
— AND —
WIRING MACHINES.

With this Press perfect foundation can be made in the wired frames, which will not sag, warp, nor break down. Samples and Circular free.

☞ For Particulars, address

D. S. GIVEN & CO.,
2-4d **HOOPESTON, ILL.**

CARY'S ANNUAL CATALOGUE OF
BEES AND SUPPLIES FOR 1883
IS NOW READY.

You should read it before making your purchases for the season. We offer you goods of very best quality, at very low prices. If you do not believe it, read our prices and send for a sample order.

Address WM. W. CARY & SON.,
2tfd Colerain, Franklin Co., Mass.

SEND 10 cts. for a package of SUMACH SEED, postpaid. Address
CHAS. KINGSLEY, Greeneville, Tenn.

1883.

COLONIES, NUCLEI, AND QUEENS,
FOR SALE CHEAP.

For terms, address
S. D. McLEAN.
2-5inq COLUMBIA, TENN.

1883.

FLAT-BOTTOM COMB FOUNDATION.—High side-walls, 4 to 14 square feet to the lb. Circular and samples free. J. VAN DEUSEN & SONS,
Sole Manufacturers,
4tfd Sprout Brook, Mont. Co., N. Y.

VANDERVORT
COMB FOUNDATION MILLS.

Send for samples and reduced price list.
11-3d JNO. VANDERVORT, Laceyville, Pa.

VON DORN'S FOUNDATION
GIVES SATISFACTION.

Recommendation: 300 per cent increase in sales in 1882. BEESWAX WANTED. Send for circular.
3-7d M. C. VON DORN, 820 S. AVE., OMAHA, NEB.

J. D. GOODRICH, East Hardwick, Vt.,
MANUFACTURER AND DEALER IN
Supplies for the Apiary.

TWO-PIECE SECTIONS A SPECIALTY.

Always *firm* and *square*. Send for circular and sample section. 2tfd

---

FOR SALE!

10 colonies of Italian Bees, in 1½-story Langstroth hives, to be delivered during March. Price $7.50 per hive, W. SHIELD, Jr., Muscatine, Mus. Co., Ia. 3d

---

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

---

1883— —1883
WANTED.
ORDERS FOR EARLY ITALIAN QUEENS!

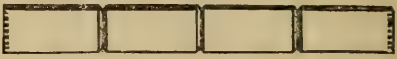
Three fine imported queens, to breed from, and 80 colonies of Italian bees. All will be devoted to queen-rearing. Single queen, $1.00; 11 for $10.00. Send for catalogue of Bee "fixin's." Beeswax wanted. J. S. TADLOCK,
2-12d Box 42, Luling, Caldwell Co., Texas.

WANTED.

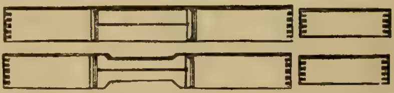
Two young men to work in Apiary and Nursery.
2-3d S. I. FREEBORN, Ithaca, Rich. Co., Wis.

HIVES, SECTIONS, &c.

Langstroth, Simplicity, and other hives.



The Lewis One-Piece Section. V groove.



The Lewis Two-Piece Sections. V groove.

We make the one-piece, two-piece, or four-piece dovetailed or nailed Sections, any size, from half-pound to 6x6x2 inches, or any other SUPPLIES for Bee-Keepers, made of wood.

4¼x4¼ of any of the above kinds of sections, - $4 50
All other sizes, larger to 6x6, - - - - - 5 00
Half-pound sections, - - - - - - - 3 50

Send for Price List and illustrations of our NEW HIVE for comb honey — something new, just out. Price Lists will be sent only to those that write for them. **G. B. LEWIS.**
Watertown, Jeff. Co., Wis., Feb. 1, 1883. 2tfd

HEADQUARTERS IN THE SOUTH
FOR THE SALE AND MANUFACTURE OF
BEE-KEEPERS' SUPPLIES

Root's Simplicity, and V. D.-N. hives, frames, sections, foundation, etc.; Italian queens and early 4-frame nuclei a specialty. See advertisement in January, 1883, GLEANINGS; and for further particulars, send for my Illustrated Catalogue.

25 cents cash, or 27 cents trade paid for beeswax.
2tfd **P. L. VIALLON, Bayou Goula, La.**

FOR SALE!

50 STRONG COLONIES, Italian and hybrid bees, in two-story Simplicity hives. STACY PETTIT,
1-3 Ft. Smith, Sebastian Co., Ark.

WANTED.

By an experienced hand, a situation in a large apiary, as manager or assistant. Have had 11 years' experience. Can furnish best of reference.
3d E. S. FOULKS, New Albany, Floyd Co, Ind.

---

50 TO 150 COLONIES OF
PURE ITALIAN BEES,

In new, superior, well-painted, movable-frame hives (frames 12¼x12¼ in.), for sale at $6.00 per colony, delivered at depot or express office at Lexington, LaFayette Co., Mo. DR. G. W. YOUNG.
3d

THE NEW IMPROVED
STEAM POWER
Comb Foundation Factory.
CHAS. OLM, Proprietor,
FOND DU LAC, WISCONSIN.
THE BEST WORK AND LOWEST PRICE.
PURE YELLOW BEESWAX IS WARRANTED. SEND FOR SAMPLES AND PRICE LIST. 3tfd

C. B. CURTIS, Selma, Ala.
Pastor 1st Congregational Church,
AND
AMATEUR DEALER IN BEES AND QUEENS.

Prices 25 per cent less than in A. I. Root's circular (due his reputation), and ready 1st of April. 100 queen-rearing colonies. DOLLAR QUEENS, and BEES BY THE POUND, a specialty.
3

GEORGE W. BAKER,
—OF—
Lewisville, Henry Co., Ind.
Has 3000 New Illustrated Circulars (to give away) of
ITALIAN BEES, QUEENS,
Plymouth Rock & Brown Leghorn Fowls.
EGGS FOR HATCHING.
Also Extractors, Honey-Knives, Smokers, etc., etc. 3-2d

FOUNDATION MACHINES FOR SALE.
Langstroth size, $3.50; any size desired, in proportion. Dipping box, 42x14, $3.00. Foundation, 40 cts. per lb. for brood; 42 cts. for sections. Pumpkin seeds, 20 cts. a pint by mail; grow as large as a half-bushel. JOHN FARIS, Town House, Smyth Co., Va.
3d

FOR SALE AT A BARGAIN.
Second-hand 4 H. P. Engine and Boiler complete, with safety-valve, governor, steam-gauge, pump, and heater, all in good running order; or will exchange for an 8 H. P., and pay the difference.
3d D. G. WEBSTER, Blaine, Boone Co., Ill.

30 or 40 Colonies of Bees For Sale very cheap
12 Gallup or Doolittle frames, crosswise, or 8 L. frames, lengthwise. Must sell. Cause, sickness and advanced age. N. A. PRUDDEN.
Ann Arbor, Mich., Feb. 13, 1883.

1883 THIRTEENTH YEAR. 1883
Italian

Syrian Queens.

Tested queens, in April and May,	$2 50
Tested queens, in June and after,	2 00
Untested queens, in April and May,	1 25
Untested queens, in June and after,	1 00

Sent by mail, and safe arrival guaranteed. Send for circular.
Address **W. P. HENDERSON,**
2-7dinq MURFREESBORO, RUTH. CO., TENN.

20 NICE **TARTARIAN CHERRY-TREES** for $1.00 (by express). Can send 20 smaller ones by mail postpaid, if desired. *Good fruit*, and makes "lots" of honey. Address
CHAS. KINGSLEY, Greeneville, Tenn.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

HEADQUARTERS FOR
Early Italian & Cyprian Queens.
Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular, containing directions for introducing queens, remarks on the new races of Bees, &c. Address
1tfd DR. J. P. H. BROWN, Augusta, Ga.

DADANT'S FOUNDATION.
—UNSOLICITED TESTIMONIALS.—
Nothing is better; your fdn. suits exactly.
Cincinnati, O., Oct. 23, 1882. CHAS. F. MUTH.
The finest and brightest I ever saw.
Adamsville, O., March, 1882. GREEN R. SHIRER.
Best I have used; no breaking down; bees take it readily. W. B. SPENCE, Sidney, Ohio, Aug. 31, 1882.
I like it better than any offered by dealers.
Baltimore, Md., Jan. 24, 1882. C. H. LAKE.
It is the nicest I have used. D. KEYES.
Louisville, Ky., June 20, 1882.
It is the best I ever saw. GEO. WUSTUM.
Racine, Wis., July 19, 1882.
Willing to pay 2 cts. per lb. more than for any I have seen. F. WILCOX, Mauston, Wis., Mar. 23, 1882.
The most perfect article that I have seen.
Christianburg, Ky. G. W. DEMAREE.
Very well satisfied. Bees worked on it finely.
Avon, St. Genevieve Co., Mo. WM. BLOOM.
Have used about 75 lbs. from ———, but I prefer yours. REV. W. BALLANTINE, Sago, Ohio.
Your foundation is the best. J. W. PORTER.
Charlottesville, Va., March 25, 1882.
The nicest I ever received. H. W. FUNK.
Bloomington, Ill.
Your fdn. beats them all. Bees draw it out further. JOS. CROWDEN, Remington, Ind.
Ahead of any fdn. maker of the world.
Borodino, N. Y. G. M. DOOLITTLE.
I concluded to send to you, even if express is higher. Council Grove, Kan. D. T. NORTON.
I never saw any nicer. G. TISDALE.
Westfield, N. Y., March 31, 1882.
Better than any I have ever had. J. B. MASON.
Mechanic's Falls, Me.
Well pleased with the foundation.
Council Bend, Ark. GEO. B. PETERS.

We are working on a new set of machinery made expressly for us. But, friends, remember that, to fill all the orders, we need wax; and if you have some, please write us. We will pay a high price for it. Send for our retail or wholesale circular, with samples free. We sell also colonies, queens, and supplies. **CHAS. DADANT & SON,**
2tfd HAMILTON, HANCOCK CO., ILL.

FOR SALE! A $350 18-ft. Challenge Wind-mill, for $150. Two sets of gear-wheels; been in use a year; runs nicely from 1 to 4 horse-power. A change of business demands sale. For particulars, write to
3d E. Y. PERKINS, JEFFERSON, GREENE CO., IOWA.

BEE KEEPERS' GUIDE
28 Pages, 50c. per year.
SPECIMEN COPY FREE.
2-4d **A. G. HILL, Kendallville, Ind.**

FOR SALE!
5 H. P. Engine; 8 H. P. Boiler; Pump, Heater, all complete, and first-class order; new; used about 4 months; cost $500.00; now $300.00. Write to Thos. F. Wittman, Model Bee Hive Co., 52d and Jefferson St., West Philadelphia. 3d

90 CENTS. One Italian queen (if ordered this month) or 6 for $4.75.
3d Address H. BARBER, Adrian, Mich.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1000; L. hives, 50c each. Circular free.
2-6d B. WALKER & CO., Capac, St. Clair Co., Mich.

Stanley's Vandervort Foundation,
PURE ITALIAN NUCLEI,
AND ALL SUPPLIES NEEDED IN THE APIARY.

We are now prepared to furnish a large amount of our celebrated foundation, immediately on receipt of orders. This foundation is all made from choice yellow wax, and the workmanship is very fine, so that we feel sure that our goods will give perfect satisfaction. We are also agents for all kinds of Bee-Keeper's goods, and can furnish them as low as factory prices, and in some cases even lower. We sell the U. S. Standard Honey-Extractor at 10 per cent off the list price to all our customers who buy other goods of us. In addition to the above we have made arrangements so that we can furnish a large number of pure Italian Nuclei at greatly reduced rates. We will sell them with tested or untested queens, or without queens, as parties may wish. Those who wish to start an apiary the coming season should write and tell just what they want, and get our prices. Our nuclei will be built on full-sized L. frames, and will be well stocked with brood and bees. In fact, we shall make the nucleus trade a business, and will give you a good trade in that class of goods. Address 3tfd

G. W. STANLEY & BRO., WYOMING, N. Y.

UNPARALLELED OFFER BEE-KEEPER'S EXCHANGE.

All those who wish to secure this "*unparalleled offer*" with a *sample* copy of BEE-KEEPER'S EXCHANGE, and our price list of Apiarian Supplies for 1883, should send their address, plainly written on a postal card, at once to

3tfd (*Successor to Houck & Peet.*) **THEO. HOUCK, Canajoharie, N. Y.**

Why not BUY YOUR QUEENS and BEES DIRECT FROM The Breeder?

25 cents saved is 25 cents made. If you wish to purchase Italian Bees or Queens early in the spring, and wish a bargain, you should send for my new Price List. Queens ready in April.

3-5d Address **W. S. CAUTHEN**, PLEASANT HILL, LANCASTER CO., S. C.

HIVES! CHEAP! CHEAP! HIVES!

Having put in new machinery, and running exclusively on Hives and Supplies, I can give satisfaction on all orders on shortest notice. Send for price list and circular of Supplies for the apiary.

3d **A. D. BENHAM, Olivet, Eaton Co., Mich.**

HEADQUARTERS IN THE WEST FOR CYPRIAN AND ITALIAN QUEENS.

Tested Cyprian queens from imported mother (Jones's importation), in April, $5.00; in May, $4.00; in June and after, $3.00. Warranted Cyprian queens, in May, $2.00; in June and after, $1.50. Italian queens from imported mother (Root's importation), after 15th May, $1.00. I have had experience in breeding queens, and guarantee satisfaction. Order now, and pay when you want queens.

3d Address **W. McKAY DOUGAN, M. D., Seneca, Newton Co., Mo.**

CHINA CEMENT.

Sets beautifully clear; is so strong that China and Glassware mended with it never again break in the same place. It is proof against boiling tea, gravies, etc. Pkg. 10 cts.; half pound, 25c. Same proof, to a great degree, against fire. Pkg. 15 cts.; half pound, 40 cts. T. S. McCLINTOCK, Abbyville, Meck. Co., Va.

BEE-KEEPERS, ATTENTION!

SIMPLICITY and CHAFF HIVES, SECTIONS, SMOKERS, ETC., ETC.

I guarantee satisfaction every time, or money refunded. QUEENS A SPECIALTY. Send for Circular and price list. 3tfd **HOWARD NICHOLAS, Etters, York Co., Pa.**

BEES BY THE POUND.

From April 20 to May 20, $1.00 per pound. After May 20, 80c. Three-frame nuclei and whole colonies for sale. Send for prices. Foundation, made on a 10-inch Root mill, same price as A. I. Root gives from month to month. 3-5d **G. W. GATES, Bartlett, Shelby Co., Tenn.**

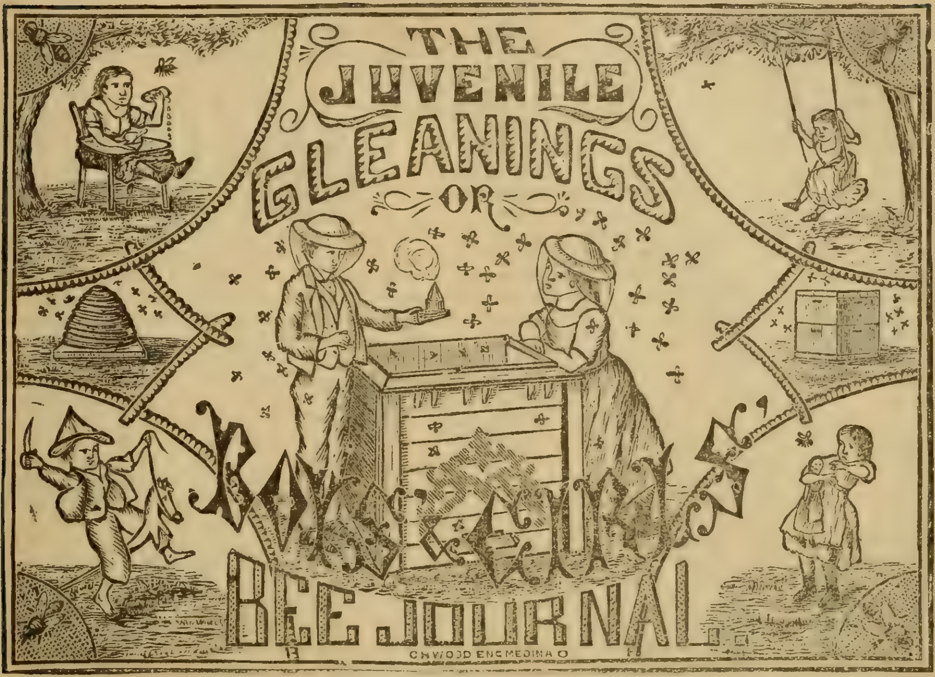
BEE HELP WANTED.

An apprentice or partner, to join me in raising **BEES and HONEY** on a large scale. The right person can have a half-interest in 150 or 300 colonies, depending on **CASH and ABILITY.** For details, apply to **M. M. BALDRIDGE St. Charles, Illinois.**

FOR SALE! 33 COLONIES BEES; 40 CHAFF,

50 SIMPLICITY HIVES, COMPLETE; 45 LBS. DADANT'S FOUNDATION. Also EXTRACTOR, LAMP NURSERY, KNIFE, SMOKER, and all things necessary for producing Comb and Extracted Honey, and for Queen-Rearing. **SQUIRES BROTHERS**, GREAT BEND, PA. 3d

GLEANINGS IN BEE CULTURE EXTRA.



He that is faithful in that which is least, is faithful also in much.—LUKE 16:10.

PUBLISHED BY A. I. ROOT, MEDINA, OHIO.

Vol. 1. MAR., 1883. No. 12.

MYSELF AND MY NEIGHBORS.

If God be for us, who can be against us?—ROM. 8:31.

MY little friends, I am now in the midst of a great "buzz." The lot of "neighbors" grouped around me is greater than it ever was before; or, at least, so it would seem; and one very pleasant feature of it is, that a great part of them are young Christians that have just started out on that journey you read about in the Pilgrim's Progress I have been sending you of late. I have a great many applications all the while for places, as you know; and, in fact, a great many more than I can possibly find places for. When the one who appeals has seemed very deserving, I have, as I have often told you, been in the habit of remembering them to God when I kneel down after the hands are all gone to their homes. Well, children, you can readily see that I can not very consistently, or very conscientiously, ask God to help me to find work for those who do not have faith in him, and who do not themselves go to him in prayer. Over and over again have these prayers been answered in such a queer way that I myself have been about as much astonished as any one.

Of course, you know I do not mean that uniting with the Church, or getting up and speaking in meeting, of itself, is going to help any one to get work, or to get any thing else they need badly; but when a girl or boy, *at the same time* that he gets up in meeting, resolves to do right, and be faithful before God, he will most assuredly get a place to work, or get almost any thing else he wants, providing he has patience to work faithfully, and has *religion* enough to want only good and proper things.

A few evenings ago, a young couple came into the office. They were recently married, and both, within a few weeks, came out on the side of Christian people. I told them I could see no possible opening, but that we would have, each and all of us, to make it a subject of prayer. They seemed so ready and willing, with the trustful, happy atmosphere of the recent meetings so manifest in their faces, that it seemed to me that God would surely heed our request. After they went out I knelt, as usual; and while in prayer it all came into my mind where I should set them at work, so plainly that I ended my request with thanks and praise for the answer, which came almost before I had got through asking.

To tell you how it came I shall have to explain a little. Orders are coming very fast now indeed. The packers, and every one who can be trusted with putting up goods, are crowded. In spite of their best endeavors, we have letters for goods piling up on our tables, even while the goods are all finished and ready to be sent out, and nobody to put them in boxes and send them off. You doubtless think it is a very simple thing to send off goods. I presume a great many of our boys and girls think if they had the goods all ready, and the money was paid for them, that they could put them in a box and mark the directions themselves. I tell you, my friends, it is no small matter to pick up a bill of goods in such an establishment as ours, and have every thing just what is wanted, and then have it go just right. It is true, the clerk can have a pencil, and mark or check every article as he puts it in the basket; but very often, people in their orders call things by different names, and in all sorts of funny ways indicate what they want. Besides, one who is not educated to the business will be almost sure to lay something down and forget it; and then when you get your box of stuff you will be vexed, and may be greatly inconvenienced by finding that the thing you wanted most isn't there. You may say it needs somebody old and experienced for such work. The experienced part may be all right; but I have not found that age makes any very great difference. Besides, if it did I can't very well afford to pay grown-up people, who can earn several dollars a day, for picking up five-cent bee-feeders and three-cent nest-eggs. Another trouble comes by having orders delayed. With such a heavy drain on our stock of goods, we are liable to run out before we know it. Some of you sent in orders that, among other things, called for alsike. When the order was received we had plenty; but by the time the shipping clerks got around to yours it was all gone. Thus you see I did you a positive wrong by our being behind.

Well, just as soon as this young friend applied, I thought of the goods to be sent out; but as he knew nothing of our goods at all, it was out of the question thinking of him for a packer. He had the strength, the good will; but who was there to be with him constantly and show him? Another point: Yesterday one of our large strong men had a heavy box of goods to put up; and with the other things was a dozen steel pens, some blanket-pins, a pocket-compass, and a lot of other little stuff that ought, by good rights, to be done up in tissue paper, and packed in a little box, something as a jeweler would do it. A good many things of this kind have been lost in the straw, because of a want of proper facilities, or, if you choose, the proper feminine fingers to do it neatly and quick. I took the goods I mentioned to Eliza, to get her to do them up; but she was hurried with lots of orders, besides customers from our own vicinity who wanted sap spiles and pails, little tins for sugar-cakes, and the like.

Now, I knew all the time while these young friends were talking, that the wife was familiar with our whole premises, for she had worked for me years before they were married. She said that she, too, would like to work for me again, if I could find a place for any more women. While on my knees the thought came into my mind that she could show him, pick up and wrap up all the light goods, and that they two would mutually help one another, so they could make it go nicely. You know I would hardly want to ask a man and woman to work together in just that way, unless they were man and wife; and here God had sent the two to help to my very door; nay, further; inside the door, right to me, and I had sent them away. I sent for them both next morning, and they are putting up orders now. Very likely there will be some mistakes, for it can not very well be avoided with new hands; but, dear friends, will not a few mistakes be better than very much delay? And again, will it not be better to put up with some trifling errors, than to advance the price of goods, as I should have to do, if I employed expensive skilled help that would be absolutely without mistakes of any kind? They gather the goods up, place them on a table in a long row, just in the order you call for them; and when all are ready, I just step in and call them off as fast as I can read. To get room for them to work we have cleared a lot of goods out of the room where the great press runs, and Mr. Gray is now busy making them a neat little table, with shelves underneath, where Mary can keep her nice paper, twine, and little boxes for the small stuff; and as this room is not far from the counter store, they can easily step in there for goods, or for instructions from Eliza.

I feared some little objection to my plan before I got through, for you know old hands are often a little particular about having their work-rooms invaded. But here I was surprised a little to find a hearty acquiescence; and when Mr. Gray found out what I "was up to" this time, he too gave me a hearty word of approval. "If God be for us, who can be against us?" Don't you see?

There, now, children, I am going to stop right here, and give you the rest of the room; for I tell you there is a heap of little letters this month. Remember our little verse, "If God be for us, who can be against us?" And God is always for us when we are for him. How many of you want always to be "on the Lord's side"?

VIRGIL'S TREATISE ON BEES.

CONTINUED.

VIRGIL suddenly "gets a bee in his bonnet" at this point of his treatise. The idea evidently strikes him, that we may all get to nodding if he keeps on giving huge chunks of wisdom about bees in a straightforward, prosy way; thereupon he brightens up, and lets off some of his poetical fireworks to set us awake. The delighted commentator in my book declares that nothing *can be* more lively or animated than Virgil's description of a bee-battle.

SPRING.

Now when the golden sun with royal might
Doth ope the door of heaven with summer light,
And conquered Winter drives beneath the pole,
As in their round the appointed seasons roll,
Forthwith the bees do wander far and wide,
Through open glade and waving sylvan side;
They reap their harvest, flowers of purple hue,
And lightly sip the waters of the dew.
Joyous henceforth they cherish nests and brood,

I know not with what love nor with what food. (1)
Fresh scales of wax they forge with cunning art,
And make their honey firm in every part. (2)

SWARMING.

When now at length, emerging from their caves,
To swim through summer's liquid, airy waves,
You shall behold a swarm ascend the sky,
Drawn by the wind as a dark cloud on high;
Then mark them well, thou surely shalt admire,
If nature's wonders feed thy soul's desire.

AUTOMATIC HIVING.

They always seek, to crown their festive hour,
Sweet waters, and withal a leafy bower.
Here strew the flavors that they deem superb —
Bruised balm and honeysuckle's common herb.
Rattle the tin, and clash the cymbals round, (3)
And they'll to medicated spots come down.
By their own laws, that ever guide their lives,
Straightway they'll place themselves within the hives. (4)

BEES ON A RAMPAGE.

But if, indeed, to battle forth they go
(For discord oft with overwhelming throe (5)
Hath seized two kings), then straightway 'tis allowed
To ken before the purpose of the crowd,
And their fierce hearts all quivering for the war;
For those delaying ones who strife abhor,
A veritable martial song inspires, (6)
Of rasping air, to kindle anger's fires,
And voice is heard, a voice that swells and rolls
Like trumpets' sound to strengthen feeble souls.
Then rush they 'mong themselves, and flash their wings,
And move their pincers, and thrust out their stings;
Thus practicing in drill they move aright,
And strengthen all their members for the fight.
Then round the king and royal court they ball, (7)
With clamor great for worthy foe they call.

Therefore when first they gain a bright spring day, (8)
With open plains of air afar away,
Like a volcano restless, surging o'er,
Forth from the gates a living tide they pour.
They charge; and in high air there swells a sound;
Mingled, a great orb, they wheel around and round;
Headlong they plunge; not thicker down the gale
From the great oak the beaten acorns hail. (9)
Down through the middle ranks the flying kings,
Distinguished over all by royal wings;
Great, noble souls in narrow breasts revolve,
Determined not to yield, with stern resolve,
Until the victor, in his conquering might,
Compels or these or these to give their backs in flight. (10)
Such tumults of their minds, such strifes adjust
By throwing o'er them handfuls of fine dust. (11)

Mercy on us! who's going to stand in the road and try it, when it rains such little "pizen pitchforks" as these? Let's "light out" as quick as we can. Let's try to think if there isn't a bee-keepers' convention somewhere that we can go to.

(1) No line we have yet come to shows so plainly the wisdom and modesty of the great author we are studying than this. To perceive how little we know, and how much that is of interest is yet to be found out, is a state of mind that fools do not attain to. Virgil was wise enough to raise two important questions here, and confess his ignorance in regard to both of them; namely, Are bees capable of feelings of affection? and, What is the nature of the food given to their young? I suppose most of the thousands of sophomores who have gone over this have said to themselves, "Humph! all creatures love their young; and the bees feed their young, honey, of course." Well, they don't feed them honey, at least not at first; and the precise nature of the food used is a problem that modern investigators are still digging away at, like dogs at a woodchuck-hole.

As to the first question, I guess we have pretty much come to the conclusion that bees have not a spark of affection about them. Whether feeding a starving comrade, or helping to murder a young queen in her cell, or nourishing the newly hatched larvæ, or turning cannibals and eating them up, they seem to be guided by a stern sense of destiny that has in it no more of tenderness than there is in the soul of a buzz-saw. Oh, they're curious creatures, these bees of ours!

While watching some bees I saw one of them attack one of his companions. I suppose he decided him to be an invalid that would be of no use in the colony. He was smart enough, however, to make a long struggle for his life; but at length he was overpowered and stung to death. I saw him curl up and die. I guess the rest of the bees didn't think he needed killing; at any rate none of them took hold to help, as they usually do when there is a muss. Well, the murderer briskly brushed himself and ran to a bystander, as much as to say, "I've done my duty, but 'twas dreadful hard work; can't you give a fellow a little honey?" And so his comrade disgorged some honey and fed him; and I felt very much disgusted with the whole business.

(2) This is the place, I believe, where the ridiculous charge is made against Virgil, that he taught that bees *make* their honey. You see, it looks differently through my spectacles—just the difference between making their "tenax" honey, and making their honey "tenax." If we did not know, as we assuredly do, that Virgil was a careful and well-informed bee-man, we should still be bound to take his statements in a sense that would be tenable, and not absurd, until obliged to understand them otherwise.

(3) Well, if Virgil did tell us to kick up a rumpus when the bees swarm, it doesn't do any harm; and nobody has *proved* but that it may do a little good.

(4) You see, it is not merely keeping the bees from going off that our author is driving at, but making them go into the hive prepared for them just of their own selves. Such an undertaking succeeds once in a while — just often enough to keep bee-men experimenting at it. Some considerable improvements have been made since Virgil's time. One is, to have a number of decoy hives placed around in distant tree-tops. Another, is to put a decoy, made in imitation of a cluster of bees, on the top of a balanced pole, which swings down with the bees when they alight on it, and deposits them at the entrance of their future home.

(5) Here is a striking example of how a long series of actual facts, minutely given in detail, can be misapprehended. The performances spoken of in this paragraph are those that precede and accompany what is called "swarming-out." Virgil, seeing no other rational cause for these movements, attributes them to the growth of a martial and belligerent spirit. The fact seems to be, that swarming-out is sometimes entirely irrational, ruinous as it is needless, and arising from protracted idleness and discontent. Usually, however, we may regard it as

nature's way of uniting unprosperous colonies. I long ago came to the conclusion, that the awful bee-rampages we sometimes read of in the papers are usually brought on by getting clusters of swarmed-out bees stirred up and infuriated — although they had no particular ill will to anybody or any thing when they came out.

(6) If I am right, this martial song, or trumpet-sound, is not really a martial song, but a death-song. When colonies are in a healthy state, the worn-out bees go away and die quietly; but in the spring, after a hard winter, this sound is often heard. It is made by a very few bees, often only one, standing in the entrance and whirring the wings with such a noise as to be heard several rods away. I am not sure, but I infer that the bee soon dies, and the sound ceases until another bee takes his place. When this noise is heard in many hives, then look out for some tall swarming-out when the weather gets fine.

(7) Everybody who has had much experience with spring dwindling ought to know how prone bees are at such times to ball their own queens.

(8) This waiting for a beautiful day and then coming out, reveals what the disturbance spoken of really is. After the terrible winter of two years ago, the first beautiful day happened to be Sunday; and I had eleven swarms cut up this caper and swarm out while I was gone to Sunday-school. So far as I could find out, however, none of them got to fighting.

(9) I did not bring out the idea in the translation, but am pretty well satisfied that the poet meant to allude to the method of gathering nuts and acorns by the use of a battering-ram. I wonder how many of the children have ever seen nuts gathered in that way. To tell the truth, I never did myself, but I have heard tell about it. A big log is pried up and hung by the middle. It is then set in motion, and sent against the trunk of the tree with such an awful "bunt" as to make the old tree quiver from bottom to top; and the nuts let go and come down — like a swarm of bees.

(10) Here is a delicate touch of Virgil's art, delightful to critics — using exactly the same word the second time, instead of changing from *these* to *those*, as we usually do. "Wallace" will have to look sharp to those printer-boys, or they will "correct" it, and make it *or these or those*, in spite of every thing. This curious form of expression helps to give the passage that air of impetuous rapidity which makes it a sort of poetic avalanche.

(11) Dust has some advantages over smoke. It requires time to get a smoke ready to use; but dust can often be had instantly. Smoke can be thrown but a little way, while dust can be hurled quite a distance. Who knows but that a deluge of dust would subdue the Cyprians that pay no attention to smoke at all? At any rate, when a square rod or more of ground is covered with bees, fighting and tumbling about in mortal combat, a bushel or two of dust promptly hurled over them may be the only thing that will stop the fighting. E. E. HASTY.

Richards, O., March 5, 1883.

I believe I shall have to agree with you, friend Hasty, that, if bees do have any love for each other, it is a queer kind of love—after a sort of cool, mathematical sort, that calculates the greatest good for the greatest number, without any thing of an emotional nature about it. They rejoice in numbers, simply because in numbers there is strength; and your "buzz-saw" illustration, I opine, is pretty near the truth. I heartily indorse your No. 1, friend H. It is a mark of a great mind to say one doesn't know; at least, once in a while.

A LITTLE LETTER FROM OUR OLD FRIEND "BESS."

PRICE OF HONEY IN WASHINGTON, ETC.

I INCLOSE you an article clipped from a paper. [See p. 66, Feb. No.] The statement of this hibernating personage sounds so delightfully sanguine that he surely must be closely related to the owner and author of "Blessed Bees." I should think, if wintering in the South is so profitable, that there would be more successful reports from Southern bee-keepers, and that honey would be at least cheaper in this section of the country; but we paid Saturday evening, in market, 30 cts. per lb. for honey in sections, and "chunk" honey retails at 25 cts., and not very nice at that. I have never laid eyes on extracted honey since I have been here, and my husband says that he *never ate any in his life.*

A FIVE-CENT STORE ON A BOOM.

If some enterprising Yankee would go into the business, I rather think he would be as successful as a merchant on 7th St., who opened a five-cent store during the holidays, and then had to hire a stout darkey to hold the door, admitting the crowd from the outside only as fast as the store emptied so as to permit it. He had to do this in order to keep his customers from being actually crushed to death.

I see by Jan. GLEANINGS that you are still devising ways and means for keeping a list of "square" men. Would it not be better to simply report those — with proper proofs — who have not the required four "right angles" of honesty, also *Cotton-y* women, to the Postmaster-General, and let him place them on the "fraud" list? He can most effectually stop their impositions on unsuspecting mankind, by simply directing postmasters not to deliver their mail matter to them at all. He has closed several firms in this way lately, I notice. One was a man in Chicago who advertised *Bibles* at a greatly reduced price, and then sent *nothing* when money was forwarded him.

With kind regards to all my old co-laborers, I am, as ever,— "BESS."

Washington, D. C., Feb. 5, 1883.

Now, Bess, I can imagine a sly twinkle in your roguish eyes, as you tell that story about the five-cent store. Are you sure you didn't exaggerate it one bit? Just invite your good husband's attention to the fact that we have to-day expressed him a 5-lb. Jones pail of clover honey, and you please tell him, will you, that it is sent to him to give to his wife for the very interesting article she has sent us, depicting the destitute condition of the Washington honey-market, and also describing the wonderful zeal of the inhabitants of said town, in patronizing five-cent stores? Please do all this faithfully and "truthfully," won't you, Bess, because it comes from your old "boss"? Come to think of it, however, there never was very much "bossing" anywhere around, so far as you and I were concerned. Suppose I say, your old co-worker. But now, dear old friend, may I just say one word more that isn't jesting? May I not very soon hear the glad news that you are (or have been for some time past) standing with your good husband out before the world, on the side of the dear Master, who has it in his power to give eternal life?

THE TOY BRICKS.

A SHORT STORY OF ALMOST 30 YEARS AGO.

MY youngest sister sends the following: Before JUVENILE GLEANINGS was commenced I intended to have the little folks hear, through the journal, of a box of miniature black-walnut bricks, made for me by my elder brother Amos, in the year 1854, I think. They were smooth and true, and, if I remember aright, were 2½ inches in length, 1¼ in width, and ½ thick. I suppose that, with the machinery he now has, he could make in one minute what then would have taken him an hour to do. A box, with strips of leather tacked from the cover to the opposite side of the box, so it would open from either side (made by that same brother), was a curiosity to many, and now he is editor of GLEANINGS, and yet pleases little folks as well as the older ones. MATTIE E. HOLMES.

Medina, Ohio, Feb. 26, 1883.

Was it really so long ago? This sister has now little girls of her own, almost old enough to write for the JUVENILE themselves. A few days ago one of them said, "Come again some time, Uncle Amos, and stay a good long while." I remember thinking at the time I made the bricks (you see I was just 14 years old then), that I was getting to be a pretty fine mechanic, for they were sawed off so true that I could stand ten of them on one end, one on the other, without their falling over. I cut them off in a little miter-box; and when I found my little sister was so much pleased with them, I felt quite happy. Some day I may give you a picture of the curious box that opened on either side.

"WITH WHAT MEASURE YE METE, IT SHALL BE MEASURED TO YOU."

THERE is nothing in the Bible put there simply to fill up. We are left at liberty to accept or reject its teachings, but are accountable for our privileges. Every good word we have ever heard is a drop of mercy; and as we have "freely received," we should "freely give." While we are under obligations to others for our pleasures, we should make others under obligation to us for their pleasures.

If we would prosper in this world, we must have exercise. Our brain may be ever so ready to act; but if you allow it to feed upon its own vain imagination or morbid fancies, it will grow weak; and through inaction our spirits also pine and die.

If a respectable neighbor refuses to work in the Sabbath-school or the temperance cause, or any work of reformation, that should not deter us from doing our duty. Our friends may be very worthy persons; but should they stammer, or lisp, it would not be very good taste for us to imitate them. We should show them much greater respect by continuing to act our own part.

Some may say they have never taken a step in the direction of right; and others, "seeing their good works," might stare. Better let them stare till they starve, than for you to neglect the opportunities afforded you for doing good, and your preparation for eternity. If our bees were as selfish as we are, we should soon quit caring for them. Let us profit by their example, and not hesitate to take advantage of every opportunity to do the little or the much our hands find to do. If we did not add one more cent to the ninety-nine, we should never have the dollar. We should not despise the day of small things. "All great reforms move slowly." Let us go forth bravely, sowing seed, and without a doubt we shall "come again, bringing our sheaves with us."

If we were without a home, and a man of wealth and power should offer us one where all our wants might be fully supplied, and yet we refuse to eat and drink, and spend our time complaining, because of our hungry condition, is it probable that we should accomplish much in bringing others where they might receive the same benefit? We are told that our Father has made all things ready, and we are commanded to go out into the highways and hedges, and compel others to come in; and "inasmuch as ye have done it unto one of the least of these, ye have done it unto me;" and the invitation is, "Whosoever will may come."

Anderson, Ind., Jan., 1883. EMMA MOHAN.

A LETTER FROM OUR FRIEND VICTORIA FIELDS.

OUR teacher being sick, school is closed for the time, and I have had some little time to pay attention to the bees. On the 26th of last month they came out and played as they do in the summer. From one hive they spotted snow all full of yellow specks. What is the reason of that? I called papa, and he hobbled out to the bee-yard, but could not tell the reason, unless it was dysentery. Papa told me to hunt in the A B C. I soon satisfied myself that such was the case. Now, there has been no weather since that when bees could fly, so we moved the straw packing of that hive yesterday, and it appeared damp and frosty; but the bees appeared all right, so we closed them up. Our other hive, the bees came out of, but did not spot the snow. I never felt so anxious about our little pets as I do this winter. I suppose it is because I take more interest in them. Papa says if he is spared, and gets able to work again, we shall have a better way of wintering by another winter.

I like to read Mrs. Harrison's letters. I think almost any person could understand her views of bee-keeping. She is original and plain. Have you bee candy for sale? I lent my catalogue, and it got lost. Papa says I must get some foundation, and try if I can not get a better yield of honey, if the season proves good. I do not think it would pay to sow seeds expressly for bee pasture in this country, when there are so many acres of wild flowers that bloom at almost all seasons of the year. Linden honey will be scarce hereafter in this neighborhood, for the people that own timber are cutting it all for pulp wood. V. J. FIELDS.

Valley Point, Pa., Feb. 1, 1883.

We have given up keeping candy for sale, Victoria, since we have found the Good candy does so well. I pretty nearly agree with you, in thinking that, as a general thing, but little immediate benefit can come from sowing seeds of bee-plants. If after you had secured bees enough to gather all the honey that now goes to waste, you had facilities for raising honey-plants by the acre, it might pay, especially if you could sell the seeds, as we do with buckwheat, alsike, rape, and other plants. Tell us about the linden-pulp wood you mention. Is it for making paper? Give my respects to your good old father. I presume the dysentery has not materially harmed your bees.

"HORSE-TALK"—A SEQUEL.

IT occurred to my mind, quite a while before that article appeared, why something of the kind could not be carried on in the lower back corner of the JUVENILE. But I was afraid to suggest it. Almost all bee-keepers own horses, cows, etc., and would be glad to read short articles of this kind. When I was a boy eight or nine years old, my father owned a fine large horse, black in color. He was noted for his many good qualities in the art of breaking colts. If we hitched a giddy-headed colt beside "old Bill" (for that was his name), and it did not seem inclined to draw, old Bill would walk leisurely along and pull the colt after him. Did colty get stubborn or headstrong, and run ahead, Bill would give him a nip in the neck or ear, and set him back. The colt would worry along for a while, and finally begin to pull. Our old friend became diseased in a few years. Veterinarians were called in, medicine given, but still it was the same. He was excused from work; we fed him moistened oats, and on this diet he lived for three or four years.

BE KIND TO THE OLD HORSES.

Friend Root, you certainly showed some wisdom when you selected oats for a feed for your old servant. "As they stand at the head of the list of the articles for the horse's feed, thrashed oats contain about 740 parts of nutritive matter to 1000, while corn has 650 to 1000." Corn is more heating than oats, which makes it more or less objectionable as a summer feed. **ALBERT KRALL.**

Ovid, Ind., Dec. 23, 1882.

THE "RED LIGHTS."

WILLIE'S HIVE WITH NO DRONE COMB IN IT.

SOME days since, I began to write to you; and after having my letter nearly completed I stopped awhile, and picked up the Feb. JUVENILE, and was reading some of the little letters, and finally came to "Red Light No. 1." *That* did not affect me; but when I came to "Red Light No. 2," I found it fit me closer than my boot; which, by the way, is a pretty *neat fit*, so I stopped, and put it on.

Now, here I am, and I dare not tell you my pa takes GLEANINGS, but you must suppose we *borrow.* I did not want you to think that, for I do not believe in borrowing even a bee journal.

And then, again, I must not tell you "my pa keeps bees." Well, I'll tell you I have a stand of my own. A natural swarm issued one morning about the middle of last June, and pa put them in a hive and went to his work on the farm; after he had been gone awhile they came out again, and then I put them into a Harbison hive, and they remained and went to work, and during the summer filled their hive with comb and honey; but not a cell of drone comb did they build. Now, what am I to do next summer for a *drone or two,* when my bees swarm? Shall I borrow a few, or buy some drone foundation, and coax them to raise some? I do not believe I'd like to borrow *drones* either. My bees are beautiful Italians; and if I borrow drones I might get a bad *mix.* I might venture to tell you, "my pa" uses the Simplicity hive, and that mine is just a little odd.

WILLIE HARDIN, age 13.

Keith's, Ohio, March 6, 1883.

I am glad to know, Willie, that you have got your eye on the "Red Lights," even if you don't quite see them as I do. If I were you I should be very glad my hive didn't have any drone comb in it, for you don't want to raise drones in the same hive you raise your queens, "no how." If you have not already done so, just "read up" the whole matter in the A B C.

JUVENILE DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Oft, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye takin' notes,
An faith, I'll prent it."

HOW many of the children are going to have a garden this spring? I think it is real fun to have a little garden, and have it nice and clean. When I am real tired, and worn out with cares, if I can get outdoors and hoe in the dirt with a nice clean sharp hoe, it rests me amazingly. I don't know whether we shall have roots of the figwort enough to sell this spring or not, for they are not up yet; but I think likely we shall see them as soon as the frost is out of the ground. If any of the children want something to do right at their homes, so as to earn some money for themselves, I don't know of any thing nicer than raising seeds of honey-plants. The spider-plant seed is very easy to raise and gather; and at the price we have had to pay this season, one ought to get rich raising it. It seems wonderful to think of it, how so many of you are sending us seeds from all over our country, and at the same time others are sending to us for the seeds which we send daily, almost all over the world. While I think of it, we are just now commencing to build another factory, or wing, rather, so as to accommodate "Eliza" and the rest of the girls, when they are putting up seeds and other goods for you. It is to run out along the road where you see the man just starting off with a load of bee-hives, in the picture in the A B C book. Now, children, I am going to stop and let you write, for we must remember this is your journal, and you are not to be crowded out by old folks. Don't forget the garden for bee-plants.

36 COLONIES, AND LOTS OF HONEY.

My pa has 36 swarms, and I have one. Pa got lots of honey in sections. I like honey.

J. EDWARD WINTER, age 8.

Becknell, Knox Co., Ind., Feb. 5, 1883.

My pa has 27 stands of bees. They are all in good condition. But we hear from all around in the country, that a great many died this winter.

ERNEST HOLLENBACH, age 12.

Noblesville, Ind., March 1, 1883.

HONEY CANDY, AND CANDIED HONEY.

Pa has 53 hives of bees; 33 are in chaff hives. Honey makes good candy, if you boil it down.

SIDNEY BRICHNER, age 9.

We have a barrel of honey, and it is all sugared solid. ANNIE BRICHNER, age 11.

Decorah, Iowa, Jan. 3, 1883.

I can help my sister to wash the dishes. I have three sisters and one brother. I like bees, and I like to watch them in the summer. In the winter they don't fly. Pa has bees, and he likes to watch them. SARAH J. BRECHBIEL, age 8.

Newburg, Cumb. Co., Pa., Feb. 26, 1883.

"GRANDMA'S BEES."

Grandma bought two hives of bees in old box hives last Sept. for $12.00. She says she is green, but is going to learn to attend them, and sow nice flowers for them this summer. They worked thick as could be on seed onions and Windsor beans.

JENNIE V. LIGHT, age 11.

HOW THEY MAKE SWARMS ALIGHT AT EMMA'S HOUSE.

Pa has got 16 stands of bees; 3 years ago he had only 2; they made lots of honey last summer. I had to watch the bees, for when they swarmed we would get tin pans, and drum on them to make them alight. EMMA QUAIN, age 12.

McDonald, Vanburen Co., Mich., March 8, 1883.

FROM 4 TO 10, AND 40 LBS. "CAP" HONEY.

Mr. Kilts has 10 swarms of bees. We had 4 colonies to begin with in the spring. We got 40 lbs. of "cap" honey. He has them packed in straw. We looked at them last week. They were all alive but one swarm. I am living with Mr. Kilts.

WILLIE L. PARMELE, age 12.

Sharon Center, Scho. Co., N. Y., Feb. 27, 1883.

A SHORT STORY, WITH A PLAIN MORAL.

Pa had 18 colonies in the fall, and it is coming spring now, and several colonies are dead. The bees fly out of the hive and drop on the snow, and die. A stabbing affray took place in Indianola a few weeks ago between a couple of young men. They were playing cards. LOU HALL.

Indianola, Warren Co., Ia., March 5, 1883.

JOSEPH'S MISHAP, AND WHAT THEY DID.

My father keeps bees. In 1882 he had 17 stands, and now he has only 10 left. Last summer my brother Joseph was hiving a swarm that was in a neighbor's tree, and he lost his hold, and all the bees fell down on him, and he ran down the garden, screaming, "Water, water, water!" and we got a bucket full and he dipped his head in, and then we pumped more on his body. I have 5 brothers and 3 sisters; the baby's name is Walter Thomas, and he has pretty blue eyes. MARTHA DODDS, age 10.

Lonaconing, Md., March 5, 1883.

HOW SOPHY'S FATHER INTRODUCES QUEENS.

My pa has 8 swarms of bees. They are in the cellar. He started with 1 lb. of bees and an Italian queen. He had two swarms of black bees that he got from one of our neighbors, and he made them Italians by introducing queens. One was a honey queen which he got from you. My pa introduces queens by caging the black one, and leaves it in for a few hours, then changes the cage, putting in the Italian, and leaves it in for 24 hours, and then lets her out. He has never lost a queen in introducing.

SOPHY SEELY, age 11.

Greenville, Mich., Feb. 25, 1883.

FROM 2 TO 8, AND 25 GALLONS OF HONEY.

My pa has 8 stands of bees; he had two old stands last spring, and he extracted 25 gallons of honey, and increased them to 8 stands. We all like honey, and I think a few stands of bees will beat a sugar-cane patch. I like to help work with the bees. I love to see the busy bee gathering flowers to make honey. SIME CARR, age 11.

Maysfield, Milam Co., Tex., March, 1883.

Why, "Sime," do the bees really gather flowers and all, down your way? I never heard of that before, although I *have* seen them take out long strings from the inside of flowers. That is a pretty good report, any way.

CHESTNUT HONEY, ETC.

We have 24 stands of bees; nearly all in very good condition. I have one stand, and papa is going to give mamma and my brother Wesley one stand each. Mamma says she wants to try your plan of putting grapevines near the hive. Grandpa White was 82 years old last January. He took 160 lbs. of box honey from one of his hives. The first honey we took off was very white and nice; but the last was quite dark. Papa said the dark was made from chestnut bloom, and the white was made from white clover and blue thistle. Where in the Bible does it say that John the Baptist ate locusts and wild honey?

HUGH J. WHITE, JR.

Broad Run Sta., Va., Feb. 21, 1883.

FROM 3 TO 8, AND THE REASON WHY — NOT MUCH HONEY.

We had 3 stands of bees last spring. They are black, and they increased to 8 stands last summer. We did not get as much as some others who keep bees, because 3 of them were in the old-fashioned box-hive. I have to watch bees in summer. I like to see them swarm. When a swarm comes out, and pa is not at home, mamma hives them, if they are not too high in a tree. Papa wants me to thank you for the bee journal you sent him. He wants to buy some new hives this spring, and wants you to send him a price list. He will come out to see you some time this spring. LOUISA A. RINDSPACH, age 11.

N. Ridgeville, O., Feb. 21, 1883.

Well, Uncle Amos, I wish you had been here the 15th and 16th to see how many bees were in the air. Our 60 stands are all alive and strong; 12 weeks since they had a fly before. MARY RIGGS.

Fairbanks, Ind., Feb. 20, 1883.

"BAD, VERY BAD LUCK."

Papa has had very bad luck with his bees this winter. He had 7 colonies, and they are all dead but 3. MARY S. HAUGHT.

Munday, Wirt Co., W. Va., Feb. 12, 1883.

NOT QUITE FROZEN.

My father has three colonies of bees, and mamma helps him to attend to them. One of his colonies pretty nearly froze to death. He brought them into the house and gave them some syrup.

LINA GILES, age 13.

Waterford, Ont., Can., Feb. 17, 1883.

A CRITICISM FROM A LITTLE GIRL.

Our little girl is very much interested in the JUVENILE; nothing in it escapes her notice. She discovered yesterday that Luke 10:16 doesn't read as you make it on first page. M. H. HUNT.

Bell Branch, Mich., Jan. 20, 1883.

Correct; it should be 16:10.

MY "VALENTINE" LETTER.

My pa had 15 colonies last spring; increased to 43; 9 left. I ran about a mile after a large swarm. They got away from me at last. I have a nice little sheep, and I have lots of fun with it. You can keep this for a valentine, if you choose.

LILY O. BUNDREN.

San Antonio, Bexar Co., Texas, Feb. 14, 1883.

THE EFFELBOWER CHILDREN.

Pa got nearly 500 lbs. of honey. I tell you, the bees make me jump when they get in my hair.

BENNIE HEFFELBOWER.

My pa had three swarms last spring, and he has 17 now. One of them died. Pa's sting me when I go out and disturb them. EDDIE HEFFELBOWER.

Cass City, Tuscola Co., Mich., Feb., 1883.

THE WAY SUSAN HELPS HER FATHER.

I help my pa carry the frames to the extractor, and then I carry them back to the hive again. Please send me a book. SUSAN MISHLER, age 8.

Ligonier, Noble Co., Ind., Feb. 23, 1883.

Why, it seems to me, Susan, that any little girl who helps her pa as much as that should have a book, even if her letter is short. Don't you? We send the book.

THE "FIRST PREMIUMS."

Papa has 18 stands of bees in the cellar, and they are doing well. He took a hive of bees to the fair, and got the first premium; also first premium on honey and bee-hives, and second on extractor. I took a basket of paper flowers to the fair, and got first premium. ELLA EDMISTON, age 9.

Adrian, Mich., Feb. 5, 1883.

HONEY-DEW, ETC.

I wrote you a letter last summer, and got such a nice book, called "Madie Grant," that I thought I would write you another. I have just been out and counted 40 stands; pa thought we got about 2000 lbs. We had honey-dews here nearly all summer; it was mostly on hickory-trees. Some say in your journal that it does not make good honey; but pa thinks that it is very good. NELLIE TOMLINSON.

Villisca, Iowa, Jan. 8, 1883.

ONE-HALF LOST IN WINTERING.

My first experience with bees was when I was little. I took a stick and poked into the entrance, and they came out, and some of them stung me severely. Last fall we had 35 swarms, and now they are half dead. Pa thinks it was caused by bad honey.

Chardon, O., Feb., 1883. CARL C. COWLES.

ONLY 2 OUT OF 50 LOST IN WINTERING.

Pa had 52 swarms of bees when winter began; but two of them died. The rest of them are all right so far; 32 are packed in sawdust, one in chaff hive, one in double box hive, one in hive lined with straw. The rest are in the cellar. SUSIE D. BECHTEL.

Caledonia, Mich., Feb. 26, 1883.

LOTTIE'S STORY.

My pa has 14 stands. They are all alive, and have had a nice fly for several days. I like bees, but I like their honey better. There is a poor man in jail for forging notes. He sent for pa to come up and see him. Pa went and talked with him a couple of times. LOTTIE SHUSS.

Pawnee City, Neb., March 4, 1883.

You see, Lottie, how quickly wickedness brings trouble. Truly, the wages of sin is death.

We have 9 hives of bees in Simplicity hives. They are Italians. We got two queens of you, and one imported one from Mr. McCormic, of Fredericksburg, last summer. They are wintering all right. We winter in the cellar; we had them out once, to take a fly. We feed oatmeal ground fine, and placed on a board in the yard in the spring, when it is warm enough. I have two Canada ring doves and one canary bird. CYRENE H. GEITGY.

Wooster, O., Feb. 28, 1883.

HONEY THAT DIDN'T CANDY.

I thank you for printing such a nice journal for us children. Father has his bees in the cellar. I should like to see Blue Eyes; my eyes are blue too. Mother drained honey out of broken combs, and put it in two half-gallon jugs and one-quart Mason jars. We kept the jar in the kitchen cupboard. When we wanted to use any, we opened the jar. We used the last of it last week, and it was just as nice and clear as ever. Mother opened a jug the other day, and found the honey just as clear as when put up. The jar was white-clover honey; that in the jug was dark honey, put up in September.

LOUISA L. HUNTER, age 12.

Kendallville, Iowa, Jan. 8, 1883.

INA'S BEE VEIL.

I like to help take care of the bees. I wore a piece of mosquito bar tied over my sun-bonnet for a veil, when I helped mother take out honey last summer. I did not have any thing over my hands, and I did not get stung once. I have a little blue-eyed brother 18 months old. He was very sick week before last, but is well now. His name is Christian. It takes us all to keep him out of mischief. Oh dear! I guess I'll ask mother to please copy my letter. I had to ask her how to spell the long words, anyhow; but I think it will be just the same; don't you, Mr. Root? INA ISABEL HUNTER.

Kendallville, Iowa, Jan. 8, 1883.

I should like to see you, Ina, with your bee-veil on. To be sure, it is all the same if you ask your mother how to spell the long words; in fact, I think it is a great deal better, for you learn to spell that way.

A JUVENILE REPORT.

Pa gave ma a little swarm of bees last summer; but they starved this winter. Pa sold all of his bees last fall. He was afraid they would all die, so we have none now; but we will get some in the spring. **Ernest Hansford.**

Troy, Gilmore Co., W. Va., March 1, 1883.

Why, Ernest, I should think yours almost a report for "Blasted Hopes." Did your father sell out because he was afraid they would *starve?*

FROM 2 TO 5, AND 150 LBS. OF HONEY.

We had two stands of bees last spring, and they increased to 5 during the summer. We received about 150 lbs. during the fall, from 2 stands; we did not get any honey from the other three; one or two swarms went off before we could get them hived. Our bees are black. We have the Champion hives, but pa is talking of getting some Simplicity hives this spring. **Walter Comin**, age 13.

College Springs, Ia., March 6, 1883.

"AUNT DRUSIE'S" WAY OF CATCHING SWARMS, ETC.

My Aunt Drusie has a frame of comb fastened to a long pole for the bees to alight on whenever they swarm. It is real handy. She thinks chaff hives are the best. I go to the Methodist Sunday-school. We have a nice library of 136 volumes. There is a lady living near here who used to be a great bee-woman, but now won't have any thing to do with bees, because she once got stung very badly. She does not believe there is any queen bee. Isn't she a strange woman? **Edna Greaves.**

Moawequa, Shelby Co., Ill., Feb. 26, 1883.

ALBERT'S FIRST LETTER.

As my pa was sending for your journal, I thought I would write a few lines to let you know that I work among bees. My pa has 10 stands of bees this winter, and I help him to put them away in the bee-house. I smoke the bees when pa takes out the frames. Last year was not a good one for bees here. I go to school every day, and I help pa do the chores morning and night. We have a sawmill, and pa runs it in the winter. This is my first letter. **Albert McCurdy**, age 11.

Hornby, Ont., Can., March, 1883.

WINTERING BEES UNDER A SNOWDRIFT.

Do you know that a big snowdrift is a good place for a hive of bees to live in, such a cold winter as this has been? My pa has two hives near the hedge that was all covered over about 3 feet deep. He thought, "Poor little things!" but he thought he would just let them alone, to see how they would get along. So one day when it was warm he dug a hole down to see if they were alive. The snow had melted around the hives; and as soon as the daylight came in, the bees came out as if they said good-morning. They were under the big drift 6 or 8 weeks, and seemed to be happy. **Jacob J. Brubaker**, age 8.

Maxwell, Story Co., Iowa, Feb., 1883.

Yes, Jacob, a snowdrift is a very good place if we can keep the snow dry, and have it cover the hives all winter.

A RUNAWAY SWARM; HOW THEY CAUGHT THEM, AND WHAT CAME OF IT.

I live on a farm, and I help papa do the work. I have 4 brothers and 2 sisters. One of my brothers and I were working in the garden when a swarm of bees came flying over us. We began pitching dirt into them, and my brother ran to the house and told mamma, and she came running out to the garden with an old pan and a stick, and she commenced pounding on it, and my brother and I kept on pitching dirt; mamma kept pounding on the pan till the bees settled on the fence, and my brother ran over to a neighbor's and got a hive. Papa was away; and when he came home he put them into the hive, and they made about 50 lbs. of honey that season. It was the 4th of June, 1881, and in 1882 they increased to 5 stands of bees, and we got 45 lbs. of honey that season. This winter we have lost one stand of bees, and papa thinks from what he has learned in the A B C book it was dysentery. Papa claims the bees, and we all like the honey. My papa takes GLEANINGS, and he thinks there is nothing like it. **Jessie H. Bull**, age 13.

Sidney, Ohio, Feb. 22, 1883.

BEES, PRINTING, AND GREENHOUSE PLANTS.

I am much interested in reading the letters in GLEANINGS. We keep bees. Last fall we made some cushions of coffee-sacking, and filled them with chaff, and placed them in the caps of the hives to keep them warm, and to absorb the moisture from their breath. Pa also made some board houses, open on one side, and set them over the hives, and filled in between them and the hives with straw. We have a printing-press, and I sometimes help pa set type, and print. I send one of my cards to Caddie, as a specimen of my printing. Pa keeps a greenhouse; one wing of it caught fire and burned down, with $400 worth of plants, the evening of Jan. 22d; but we have rebuilt it, and have it ready for plants again. I will send you one of pa's catalogues. **Verna V. Abbott**, age 9.

Morena, Mich., March 1, 1883.

Well, I declare, Verna, you must be a busy sort of people at your house; and if you have such an eye for all the business going on at only 9 years old, I should think likely you would be a busy woman when you grow up. May God bless you all!

DOES THE OLD QUEEN LEAD OUT THE SWARM?

I write to you for information in regard to bees swarming. The question which I wish to ask you is, whether the young queens leave with the swarms, or the old ones. Some say the old, and some the young queens. Please inform me through your next JUVENILE, giving me the thoughts of other good substantial bee-men. **Willie Trimble.**

Washington, Ills., Jan. 18, 1883.

The time has almost gone by to discuss such questions, friend Willie. When we had bees in hollow trees and box hives, we had to guess and speculate; but now it is all as open and plain as the broad daylight. The old queen leads out all first swarms, as a rule. The exceptions are usually caused by the death of the old queen, or something of that sort. If the same swarm sends out a swarm the same season, the old queen leads as before, so she keeps traveling from one hive to another, as long as she lives. That is, she travels every time a swarm goes out. Bees don't seem to approve of the idea of setting a young miss at housekeeping in a new house, when they can send out an old hand.

FROM 5 TO 10, AND 300 LBS. OF HONEY.

I started one year ago with 5 colonies; increased to 10. During the summer I took off 300 lbs. of section honey, for which I received 15 cts. per lb. My bees are in fine condition up to this date. I expect to have a grand time with them next summer. I love the little fellows. J. P. ALSHOUSE.

Evansport, O., March 8, 1883.

And well you might, friend A.

FREDDIE AND LULU.

My pa keeps bees. I have a stand in nice condition. Pa says I must learn to manage the bees. I go to Sunday-school. I have a little brother; he says he is a honey boy, but not a bee boy.

FREDDIE GRIFFIN, age 9.

We live on the river, very near the railroad. It is a good place for bees. There are lots of willow and maple trees. My papa has a few stands of bees. I do not know much about them, but expect to learn this summer, and tell how I got along with them.

JULIA A. GRIFFIN, age 12.

Shadwell, Va., Feb. 6, 1883.

FROM 3 TO 8, AND 300 LBS. OF HONEY.

Pa had 3 swarms of bees in the spring. They were in the old box hives. His were natural swarms and they increased up to eight, and he took 300 lbs. of honey. He got 16c. per lb. for it. It is so cold here that the bees can not get a flight. He lost four swarms this winter with the dysentery.

WM. J. OGDEN, age 12.

Arkona, Ont., Can., Feb. 25, 1883.

WHEN BEES ARE CROSS.

My uncle keeps bees. They are hybrids; they had no honey when he first got them, and we could handle them any way until they got their frames full of honey; then they were awful cross. They were all right a few weeks ago. DAN LIGHT.

Port Burwell, Ont., Can., Feb. 14, 1883.

I think, Dan, you haven't got it quite as you intended to. The bees are generally very peaceable when they are getting honey every day; but as soon as it begins to be hard to find, then they get cross.

METHODIST BEES, AND "BABY-QUEENS."

Pa says his bees are Methodist bees, because they do not swarm on Sunday. Pa had some little hives, and he said he was raising baby-queens in them. Is that the way you raise baby-queens? I hope you will not be offended at me for writing to you. I am not very good at writing letters yet, but I am studying very hard. Ma is waiting to take me to bed. I read a few verses out of my Bible before I retire.

ADA STURGEON, age 11.

Kincardine, Ont., Can., Feb. 23, 1883.

BEES BETWEEN THE FLOOR AND CEILING.

My pa has 15 colonies of bees. He likes to work with them. The first we had pa found in our house between the garret floor and the ceiling. When he took it out it had quite a lot of honey. He did not know how to manage bees then, and they died; but since then he has studied the A B C book, and reads GLEANINGS. JOHN G. BASEHORE.

Mechanicsburg, Pa., Feb. 22, 1883.

Bees must be badly off in your neighborhood, it seems to me, John, to take up such quarters for a hive. I hope you and your pa will give them better accommodations, now you have the A B C book.

FROM 1 TO 4, AND 125 LBS. OF HONEY.

This is my first letter. My pa got a stand of bees from B. F. Little, June 2d, and we have four stands now, and expect to get 125 lbs. of comb honey. I hope they will come out all right. They are in good condition now. A. W. HOWARD, age 8.

Randalia, Fayette Co., Iowa, March, 1883.

A 6-YEAR-OLD "CONTRIBUTOR."

I am a little boy six years of age. My father keeps bees, and 19 partridge-cochin chickens. Pa and ma want to buy a farm and go to the country and get some sheep and cows and horses. I never went to school one day, but I can read in the First Reader. My pa and ma taught me at home. This is my first letter. GEORGE M. POGUE.

St. Clairsville, O., Feb. 23, 1883.

JOHNNIE'S BEES THAT WERE FOUND IN A CORNFIELD.

Pa has 41 hives of bees. He has two Holy-Land queens, which are very nice. I love to watch the bees work, but I am afraid of them; they don't like me very well. Pa extracted 2000 lbs. of honey last summer. I have one hive of bees. Pa found it in the cornfield, and gave it to me. It had settled on the ground. They were black bees. He took the black queen away from them and gave them a frame of brood, and let them raise an Italian queen. Bees here make honey mostly of horsemint.

JOHNNIE A. KEMP, age 10.

Maysfield, Milam Co., Tex., Feb. 18, 1883.

STRAWBERRIES AND HONEY.

My pa has 11 swarms of bees. He uses the L. hive. He bought 4 Italian queens. He has one swarm of hybrids, and one of black bees. I think it is fun to give them honey on a plate, and watch them with a magnifying-glass. We have 11 acres of strawberries to pick. Pa says I have got to take care of them; but I don't think I can. I sometimes tend the smoker for him. LOTTIE M. HARRIS, age 12.

Well, Lottie, I don't quite think I could take care of *eleven acres* of strawberries, but I might take care of a small basket full, if I should happen along in berry time.

My brother found a swarm of bees in an oak-tree, and that started pa to keeping bees.

FREDDIE J. HARRIS, age 10.

Toledo, O., Jan. 21, 1883.

A LETTER FROM ONE OF THE CITY ORPHANS.

I am an orphan boy. I came from New York city with a carload of children to find homes in the country. I have a good home. One of the girls, Hannah Williams, keeps bees. She takes GLEANINGS, and sends for things. Last fall, when they put the bees in the cellar they found the bees in one hive all on the ground under the hive, dead. The inside of the hive seemed all right, and there was a plenty of honey; but we didn't know what made them die. I like honey, and have all I want to eat. I like to be around when they extract. We have twelve stands of bees. I came here three years ago, and did not know all the letters; now I read in the Fourth Reader, and study part third of geography, and am ciphering in factoring.

GEORGE RODNER, age 11.

Springville, Ia., Feb. 20, 1883.

George, you may thank God for being rescued from the life you might have led, and for the good Christian home you have found. I think you have done pretty well for only three years.

THE FISHER CHILDREN AND THE BEE-TREE.

My pa had 3 hives of bees in the spring, and now he has ten. He got lots of honey from them. The 12th of February he had my uncle and one of our neighbors cutting logs for him; and as I heard the tree fall, my little sister and I ran to them and went up in the tree-top, and I thought it curious to see bees flying around there; and so I went on a little further, and found the bees. It was late in the evening, and we put a quilt over them and let them stay till the next day about noon, and then we took the hive and hived them. My pa put them in the house and let them stay a day or two, and then put them out where the other bees were, and the bees began to rob them; and then he took them back into the house and began to feed them. My school is out now. I went every day. There were 98 days, and I missed but two lessons.

FRANKY FISHER, age 11.

My pa has bees, and I help him tend to them. He takes **GLEANINGS**, and I read so much about little children writing, I thought I would write some. My mother has 9 birds, and I help her tend to them, and I wash the dishes for her. **LELA FISHER**, age 9.

Maplewood, Ind., Feb. 24, 1883.

FOUR-YEAR-OLD HARRY'S EXPERIENCE IN BEE CULTURE.

My papa works in the sash factory. One night last summer when he came home he said, "Who has been taking the covers off the bee-hives?"

Our four-year-old Harry said, "I did, papa, but the bees *bit* me so I could not put them on again." I am left-handed. **ANNE V. D. CASE**, age 9.

THE HIVE THAT WAS QUEENLESS, ETC.

We began keeping bees last spring. Father purchased three swarms of what were called Italians, but we have made up our minds that they are hybrids. One swarm proved to be queenless; but we did not take any bee paper, so did not know what was the matter. After some time an old man came to our house, and was looking at the bees, when he discovered that there was no queen. The swarm became reduced so much that we put the rest of them in with another swarm and now we have two nice colonies. I think we shall have no more trouble, now that we take **GLEANINGS**. Father is going to send for an A B C book.

STONE FOR HIVE-COVERS.

There is a stone-quarry a little way out of town, and father was there getting stones to flag our cellar bottom, when he found some very thin ones, which the man gave him. He brought some home, and made covers for the Simplicity hives. First he squared the stone, then took a common prick punch and marked it around. Then he broke it across a saw-horse. It is as true as slate. The stones are from ¼ to ¾ of an inch thick. I should like your opinion in regard to the stone covers.

HATTIE L. CASE, age 14.

Sherburne, Chenango Co., N. Y., Feb. 20, 1883.

I think they will do tiptop, Hattie. They won't warp, rot, leak, nor get blown off by the wind. If you rub two against each other, you can make them as smooth as a board. Thank you for the idea, little friend.

A YOUNG BEE-MAN'S LETTER.

I am ten years old, and have had to watch the bees all summer for five years, to see when they were going to swarm. I can hive them alone, so you see I ought to know something, so I am going to tell you something new for the **JUVENILE**. I guess it is new, because I don't see it in any of your bee-papers or books.

CHARLIE'S PLAN FOR UNITING NUCLEI.

When you want to double up your nuclei in the fall, or weak hives in the spring, just lift all the hives and set them close to the one where you are going to leave them. Lift out all the frames, and shake all the bees down in front of the hive; cover the hive up; move all the hives and the fixing that had the bees in; then take a little hammer and rap on the side of the hive till those inside roar again; then these fellows outside think they are swarming, so they will all run in, and those that are flying will all come in too, and stay there without fighting.

CHARLES WHITFIELD.

Dundas, Ont., Can., Feb. 19, 1883.

Your plan is a very good one, Charles, and the drumming you describe will usually cause them to accept the new location, and adhere to it, just as if they were a natural swarm.

THE HEN BUSINESS.

I have been reading the **JUVENILE**, and I see that you have been in the hen business. I wish that you would write some more about hens. That is what interests me the most, for I am in the hen business. I am going to see what a girl 10 years old can do raising chickens this summer. I want you to ask some of your nieces if they want to see who can raise the most chickens this summer, then we will write and tell you in the fall.

Our bees are in the cellar yet, and they want to get out very much; but the yard where we keep them is full of snow. Papa let his bees fly last year the 10th of February. **GERTIE S. HALL.**

Northfield, Minn., March 1, 1883.

Well, Gertie, we have got about two or three dozen hens; but they find so many places to hide their nests in our big warehouse, that we can never find them. If you know of any little girl who is *real good* at finding hen's-nests, I wish she would come and help us get the eggs.

ABOUT THE BEES, AND HOW TO MAKE HENS LAY, &C.

Pa got 1400 lbs. of extracted honey from 35 stands last summer, and we extracted about 18 lbs. last Saturday.

If you want to get a heap of eggs, take red pepper and dry it by the fire, so you can mash it, and mix with the feed; then give it to the hens once a week. I see so many of you are asking Bible questions, I thought I would ask one. Where was Moses when the light went out? Sister Fannie has written a letter, and sends it with mine.

BETTIE G. FARIS, age 13.

My pa has been keeping bees for 15 years, and has a sawmill on his farm. Our chickens have the cholera. Do you know what will cure them? I help my two little brothers haul fodder, and we have the most fun on top of it. I have a little brother, as sweet as a peach, and he has blue eyes.

FANNIE M. FARIS, age 9.

Town House, Smyth Co., Va.

And so you are Mr. Faris's children, are you, Bettie and Fannie? We know him, for he is the man who makes fdn. with plaster molds. Thank you, Bettie, for telling how to make the hens lay. I don't know how to stop the "hen cholera," unless it is to keep them *clean*.

FROM ONE OF OUR CANADA JUVENILES.

My pa has two stands of bees; he bought a stand last spring. They swarmed once; we packed them in sawdust last fall. We take GLEANINGS. I like to read the children's letters in the JUVENILE. We live on the farm adjoining Mr. John Calvert's. We knew Albert, and were very sorry when we heard of his death. He was a nice, quiet boy. This is my first letter. EDWIN FLEMING.

Reaboro, Canada, Feb. 6, 1883.

We do not take GLEANINGS, but my uncle does, and I get the JUVENILE to read. I like it very much. We have four stands now. We did have 7, but 3 died during the winter. I go to school at the White Sulphur Springs. I study grammar, U. S. history, etc. I like to go to school. I have one little sister three years old. We have been keeping bees for three years, and I have been stung but once. I like bees, and honey also. Our bees suck the spider plant. JOHN W. CALDWELL, age 11.

White Sulphur Springs, Ga.

ERNEST'S REPORT.

Papa bought two queens and 2 lbs. of Italian bees from you last June, and now we have 10 hives of Italians. He has them all nicely packed in chaff. I think chaff and foundation are good things for bees. Our bees have wintered well, and on the 3d day of February, they worked all day and cleaned up their houses for spring, and on the 15th they were gathering pollen; but I do not know where they found it. ERNEST B. DAVENPORT, age 11.

Hodgenville, Ky., Feb. 25, 1883.

ONLY 22 LEFT, OUT OF 37.

Out of 37 hives of bees we have 22 left. For the last few days they have been flying almost as in swarming time, bringing in pollen. Papa says they get it from maple and other flowers. We have been feeding them on sugar made from sugar-cane. They like it very much. From the other bees that died we got only 2½ lbs. of wax. We had a swarm last October. They are living, and doing as well as the others. NETTIE MILLER, age 12.

Minden, La., Feb. 16, 1883.

"CHUB" AND HER FATHER, "LITTLE BEN."

My pa has kept bees for the last 25 years. He has 79 swarms now, all packed in chaff. I helped him pack them. We have lots of honey and sell it in Albany. I am a big boy; my pa calls himself "Little Ben." He weighs 220 lbs. I have a little blue-eyed sister about a year old, and I think she is pretty. Her name is Myra, but we call her "Chub." Pa is going to send for one of your scales, and then I will weigh her. EARL AUCHAMPAUGH, age 8.

West Township, N. Y., Feb. 27, 1883.

HOW THE BEES WERE SAVED FROM BRIMSTONING.

One of our neighbors last fall was going to brimstone one of his colonies. Pa told him that he would take the honey for him if he would let him have the bees. The 2d of November he took the honey and brought the bees home, and fed them up, and they are now in good condition. Pa gave me one colony, but it has become queenless this winter. Can you furnish me a queen by April 1, and at what price? My Simpson plant did well last summer. Pa has 12 stands. J. A. SHENEMAN.

Pharisburg, O., March, 1883.

A HONEY-HOUSE WITH LEGS TO IT.

Pa has 100 colonies. He has a honey-house with legs under it. The legs stand in small pans, and in the summer we fill the pans with water, so the ants can't get in and bother pa and eat the honey. I have a brother 10 years old. His name is Willie. RENNIE MOREHOUSE, age 12.

Mombaccus, N. Y., Feb. 15, 1883.

Very good, Rennie. I suppose your pa gets up into that house and just puts his thumb against the side of his nose, and then wiggles his fingers at the ants, doesn't he? Very likely the ants look up at him "discouraged like," and don't say a word back.

A BUMBLE-BEE STORY.

My Uncle Edwin keeps bees; my Uncle Harry keeps bees too, and my papa raises flowers. I go to school and Sunday-school and church. I lifted up a board and saw a lot of bumble-bees, and one stung me. I like the bees that make honey. I like the honey better than the bees. The bees get honey from clover and mint. I wrote the best I could. ADA GRANIGER, age 9.

Deer Park, Ont., Can., Feb. 23, 1883.

I dare say you did write the best you could, Ada, and it is very well indeed for a 9-year-old "chick." Somebody has said, that when we do the best we can, "angels can do no more."

FROM 20 TO 53, AND 3000 LBS. OF HONEY.

Pa has 53 colonies, and I have one. They are on their summer stands, all covered with straw about a foot deep, and are all right so far as we know. Feb. 19th being a nice day, pa opened 8 or 10, and they had a flight, and to-day pa and I opened all, and they flew lively. He received from his 20 colonies, spring count, 2500 lbs. of extracted honey and 500 lbs. of comb honey; and I, from my nuclei of four sash, 47 lbs. of comb honey and 53 lbs. of extracted honey. LEWIS H. TRESTER, age 14.

Lincoln, Neb., Feb. 24, 1883.

JOHNNY'S HONEY CROP, AND HOW HE DISPOSED OF IT.

I have only one swarm of bees, and I won't have them unless they come out all right in the spring. They are a second swarm. My papa gave them to me for tending his bees in swarming-time. They made 30 lbs. of surplus honey in one-pound sections, besides filling their hive. I sold the honey in London for 22 cts. a lb., and bought a stem-winding watch at five dollars, so you see when I am tending bees the coming season I can tell exactly the minute they swarm. It has been very deep snow here; the thermometer has been as low as 14° below zero. JOHNNY COLEMAN, age 12.

Devizes, Ont., Can., March, 1883.

JOSEPH'S LETTER, AND HOW HE WROTE IT.

Brother Jimmie wrote you a letter, and got a book. Ma said I might, for I wanted a book so bad. Ma holds my hand while I write. Ma said she did not know whether you would send a book or not, but I might try. Papa is going to send to you for some goods before long. His bees are doing nicely, and flying lots to-day. JOSEPH H. WALLACE, age 6.

Wheatland, Ind., March, 1883.

Such a letter will do tiptop, Joseph, and I hope that it will be not only while you are learning to write that you let your mother hold your hand and guide you, but that even when you are a big grown-up man, your hand may be often in hers, and that her pure love may guide you.

MOVING BEES FOR BETTER PASTURAGE.

Last December my brother, W. F. Miles, moved 120 stands of bees over a mountain road, to a little town about 70 miles from here, on a big wagon, with 4 horses. We have 50 stands here of our own, and 50 of another man. The weather is quite warm, and the bees are carrying in lots of pollen. It was not a good honey season here last year, and not a good prospect for one this year. My brother expects to be at Lompoc a good deal this year with his bees, and so I shall have to help with the bees here. One of our neighbors is a nephew of I. R. Good, the man who writes so much for the GLEANINGS.

LAURA MILES, age 13.

Santa Barbara, Cal., Feb. 27, 1885.

Your description of moving the bees is very good, Laura; but you didn't tell us whether it was a paying speculation or not. Did he get lots of honey to pay for all that trouble?

IVA'S REPORT.

I assist father in watching the bees and putting sections together. Four years ago father bought one swarm of Italian bees. Two years ago bees did not do well; the season was poor; they swarmed much; made little honey. My father commenced the first of August to put back all that came out; hived them in a cap, and put them on the hive they came out of. Father kept his in the cellar. They came out strong and healthy in spring. When weather in winter will admit, he puts them out once before spring. I do not know the whole amount received last year. Some swarms produced two more, some three, and 120 lbs. of cap honey. He has sold 24 swarms; has 50 now in cellar.

A FUNNY BEE-TREE.

My uncle found bees in a large hollow sycamore-tree lying on the ground. There was more than one barrel of comb well filled. Some of it was very white. The bees were working in one end.

IVA M. BAILEY, age 11.

Shepherdsville, Mich., Feb., 1883.

POLLEN FROM THE ELM.

On the 27th day of this month the bees were out in force, and returned carrying in the gold-dust on their legs. They gather it from the water-elm trees, which grow on the bank of the creeks; they are budding now. "Wiggins'" cold wave rolled down upon us, and froze some of our little darlings. I notice the bees bringing the dead ones out. The bee-tree stands it the best, as I see less dead ones about it. May be it is the best hive, after all.

REPORT FROM THE GOOD CANDY.

Pa fed the bees'last week, some Good candy mixed up with white granulated sugar and honey about like dough. The bees sifted the honey out, and left the sugar as it was before being mixed; and I noticed they were bringing the grains of sugar out of the hive. How is this? We shall get swarms in one month from now. Pa has the "Early Texas Prolific Black bee." Do you want a queen?

TOMMIE H. MULLIN.

Oakland, Texas, Jan. 30, 1883.

I don't believe I do, Tommie. Many thanks, nevertheless. Much obliged for your report about the Good candy.

My pa has 16 swarms of bees in the cellar, doing nicely. Last summer he got over 50 lbs. of honey from them. The night they were taking the bees into the cellar, they saw an owl in one of our maple-trees, and my brother shot it, and my mother had the taxidermist stuff it. My brother has a gun and a dog, and he goes a hunting when school does not keep; but the dog catches almost all of the rabbits. I can ride our pony, for I have a side-saddle. I can harness our pony to the buggy.

NELLIE G. WHITNEY.

Rockton, Win. Co., Wis., March 4, 1883.

Can harness the pony to the buggy, only ten years old, and a girl at that! My sakes! but aren't we getting smart? I wonder how many of the rest can do as well. I know some little girls who sometimes think they can't even bring the eggs.

LOOK OUT FOR STINGS ON THE EYE, ETC.

My father got stung on the eyelid last summer. The sting worked through into the ball of the eye, and the doctor had to dig it out. He was very sick for a long time. I am getting a collection of postage-stamps. When you get letters from foreign countries, will you please send me the stamps on them, and I will pay you for your trouble? Please tell what country they are from, if it is hard to tell. We have three swarms of bees here now. We have sold two of them. My father has gone to Ashtabula, Ohio. He thinks he will come to see you on the way home.

BRET HOPKINS.

Fort Wayne, Ind., Feb. 28, 1883.

Bees do sometimes sting one in the eyelid; but if, when a bee comes buzzing near the eyes, we are careful to hold up the hand a little before the eye, we can generally avoid letting them get a chance to sting in such a dangerous place.—I will have "Ida" save the foreign envelopes for you, after this.—We shall be glad to see your father; but tell him to show us this letter in the JUVENILE, or we may not remember him.

HOW TO GET SPIDER AND FIGWORT PLANTS.

Mamma planted some spider and Simpson seed in a box. Some have their second leaves on. When they get old enough she will transplant them into a paper box. I will tell you how she makes the boxes. She takes two square pieces of newspaper, any size you wish; paste together; then fold two sides toward the center — one side, then the opposite; then fold the ends the same. Cut down the folds of the folded ends to where they are folded over; then take the middle piece of the end; cut and fold the sides over, and paste, and you have a nice box. I send you a sample one half folded. When you wish to plant in the garden, wet the paper and press the dirt around and over it. I think we should have a rather hard time to get the bees here if they should alight on a fir-tree that is 200 feet high and 5 or 6 ft. at the base; don't you?

WILLA ROSE, age 14.

Leland Valley, Wash. Terr., Feb. 11, 1883.

Very well done, Willa. Your ma is quite ingenious. I will explain to our other little friends, that these paper boxes are much like a paper of carpet-tacks after the tacks are used out. I know by experience that these paper boxes are a nice way to fix choice plants so they can be easily transplanted, without setting them back a particle.

MARY'S FATHER'S ASSISTANT.

My father has 75 swarms of bees, all wintering out of doors, packed in chaff. I have to watch them in swarming time, and have to step lively, when half a dozen swarms come out at once, to wait on pa while he hives them. He sold about a ton of surplus honey. We have had a very hard winter here. The bees have not had a good fly so far. We don't know how they are wintering.

MARY E. WHEATOSS, age 11.

Deposit, Broome Co., N. Y., Feb. 25, 1883.

HOW IDA SWARMED THE BEES.

Pa has some bees. One day when he was away, one of the colonies swarmed. My brother, who is six years older than I am, tried to hive them; but he got stung, and left them for me to hive. I put on pa's veil, and got them all into three boxes. I covered them up so they could not get out, as I thought. But when I came to look at them they were all in one box. The box was turned upside down, so I put a board under it. Wilfred helped me to carry it into the barn. We left them in the barn until pa came home. I hived another swarm after that. Pa gave me ten cents apiece for hiving them. My sister Fanny has been stung only once all the time we have had the bees. This is the first time I have written for any paper. I hope next time to do better. **IDA SINGLETON**, age 13.

Cleveland, O., Feb. 20, 1883.

A WARNING TO PAPAS.

I will endeavor to tell you how my papa makes candy for his bees, trying to remember the "red lights." And though it may seem to you like the old story of "Cap'n Rice, he gin a treat," I shall have to tell it in my own way. He made the candy of granulated sugar, grape sugar, and wheat flour. He did not have very good success, however; it would not harden, and papa got it all over his hands and trousers. When he touched any thing it reminded me of Aunt Jemima's celebrated plaster — "the more you tried to pull it off, the more 'twould stick the faster." He is now reading the A B C, and thinks he will improve his candy by adding more granulated sugar. Papa bought four colonies of Italian bees in chaff hives, so we now have 30 colonies in good condition. **CLARA E. GRUBB.**

Key, Belmont Co., O., Feb. 27, 1883.

Thank you for remembering the "red lights," Clara."

WHAT A SHEPHERD DOG DID.

A neighbor of ours is a sheep-dealer. He buys sheep around here, and then ships them to Chicago. One night the sheep would not go into the car. He would not have got them in at all, had it not been for his dog. It happened this way: He would carry one or two in, then they would run out again. They kept it up this way until they were tired out. Then just as they were about to give it up, his dog came to his help. Three minutes after the dog came, the sheep were on board. As soon as he got through he went back home. The man lived about two miles across the fields from where he loaded the sheep. All this happened at midnight one day last week.

IRVIN ADKINS, age 14.

Union Mills, Ind., Feb. 25, 1883.

So you see, Irvin, that even a dog has his work in life, and he can do his work even better than a man can do it.

A JUVENILE LETTER FROM THE COTTON-FIELDS.

Pa found a swarm of bees last summer on a mesquite-tree. Then it swarmed again. We got 70 lbs. of honey in caps on top of the gums. Pa sent for some Simplicity hives. His letter got lost, and came back to him; but he started it again. I have a hive of bees of my own. I picked cotton at $1.00 a hundred, and made over $10.00, besides helping pa pick his. He raised 8 bales. To-day is bright and warm, and bees are awful busy bringing in pollen. Where do they get it?

We have a big patch of turnips that stood all winter, and are now in bloom; and this morning, when papa and I were getting "greens," we saw lots of bees on them. May be that is where they get the pollen. Pa copied my letter, and says it is too long. If so, throw it aside. **ARTHUR GOODRICH**, age 7.

Hanover, Texas, Feb. 24, 1883.

Very good, Arthur. I don't think your letter is too long. We are very glad to hear about the cotton. I think it was the turnips the pollen came from.

HOW MR. T. LET ONE COLONY STARVE.

Our bees are wintering nicely. Part are buried and part are in cellar. One swarm starved in February, with lots of honey. It was queenless last fall, and pa gave them a small swarm that was in a box, by setting the box on the honey-board. The bees remained in the box, and there were no winter-passages in the combs below, so they could not get at their honey when it was so cold. Pa says we must not let any more starve. We had lots of honey last year. All was sold mostly at one store. It brought 20 cts. per lb. in cigar-boxes; 22 cts. in sections; 15 cts. extracted. **W. S. TIMMERMAN.**

Fayette, Iowa, Feb. 23, 1883.

Why, W., do you have the bees store honey in *cigar*-boxes? I should suppose the honey would be flavored wirh tobacco.

THE WAY MARY AND HER BROTHER GO TO SCHOOL.

I am a cripple. I can not walk to school, so my brother Willie and I go to school a horseback.

Fayette, Iowa. **MARY L. TIMMERMAN.**

That is right, Mary; go to school, even if it *is* some trouble.

FROM 12 TO 39, AND 400 LBS. OF HONEY.

Last spring my brother had 12 swarms of bees; they have increased to 39, and he got about 4000 lbs., of which 3000 was extracted, and 1000 comb honey. He uses the Langstroth-hive bottom, and flat top. Some of his bees are in the bee-house, and some are on the ground, covered with straw and chaff. He has a stove in the bee-house, and builds a fire in it in the cold weather, to dry it off. I have got no bees of my own, but I helped him get the honey and extract it.

THE QUEEN THAT GOT LOST AND FELL IN A PAN.

Last spring the bees would fly out, and I watched them some of the time; but I took a book with me to read, and 8 or 9 queens were lost by swarming when nobody was around. One day when we were extracting we found a queen in a pan near where we were at work. Brother did not know how she got there, but he thought she had got on his clothes and dropped off; but the next thing was to find the hive she belonged in. He then caged her, and placed her in the hive he thought she belonged in.

BURTON HARRINGTON.

Homestead, Ia., Feb. 26, 1883.

TOMMIE'S BEE-TREE, IN THE DOORYARD.

Pa has commenced taking GLEANINGS, and I see so many little fellows' letters in the JUVENILE that I thought I would tell you about a bee-tree we have in the yard. A man found it in the swamp; it was in a big post-oak tree, and he sold it to my pa. Pa hired two men, and we took the wagon, early one morning last fall and cut the tree down, stopped up the hole with a bunch of moss, sawed the limb off that the bees were in, put it into the wagon, and hauled it home. The limb is about 6 feet long, from 6 to 10 inches in diameter, a little crooked, but the grain twisting. The hole is near the middle, and about as big as my fist. Pa nailed a piece of plank on each end, set it up in the yard, pulled the moss out of the hole, and the way those bees poured out and looked surprised was a wonder! They went to work and seem contented. It is full of comb from top to bottom. Now, what is best to be done with it? TOMMIE H. MULLIN, age 11.

Oakland, Texas, Jan. 5, 1883.

Just transfer them, Tommie, when apple-trees bloom. If you read "Bee-hunting," and "Transferring," in A B C, you will know all about what to do.

KIND WORDS FROM OUR CUSTOMERS.

The pruning shears are far better than I could possibly have expected for the money.
Luling, Tex., Jan. 17, 1883. J. S. TADLOCK.

We received your iron plane and knife and chain with a great exclamation, "How cheap!"
C. P. SANDERS.
Gainsville, Green Co., Ark., Feb. 2, 1883.

The 50-cent smoker is, I think, the best I have ever examined. The 35-cent knife is as good as I can get here for 75 c. G. D. BLACK.
Brandon, Ia., March 7, 1883.

The foot-power saw is a daisy — nothing but play to cut inch linden. A boy of 14 can do good work. The way the wheel is hung is what does it.
Oakley, Ia., Feb. 23, 1883. WM. MALONE.

Emma is highly pleased with the books you sent. In less than a week they were read through by four of us. If you were to drop in here, every one would run up to you to shake hands. M. L. WILLIAMS.
Vanceburg, Ky., March 6, 1883.

Your goods came all right, and are perfectly satisfactory. We are not only pleased, but will continue dealing with you as long as you are so prompt.
WM. ST. MARTZ.
Martinsville, W. Va., March 7, 1883.

Mr. Root, that one pound of bees and queen you sent me I was perfectly satisfied with. You sent them in June, and they have made a hive full of honey. HENRY D. AINSWORTH.
Westboro, Mass., Jan. 31, 1883.

THE 50-CENT SMOKERS.

The seven smokers we received give full satisfaction; so does every thing we have from you.
LEONARD HAMMERSCHMIDT.
Homestead, Ia., Dec. 22, 1882.

I was much pleased with the sections I received from you. They *more* than met my expectations. My honey sold more readily in them than in the boxes. MRS. W. H. SCOTT, JR.
West Union, Ia., Dec. 17, 1882.

The 10-inch cross-cut saw is at hand, and is splendid. The other articles came too, and are a wonder for the money. I recived the first number of GLEANINGS, and like it first rate. G. L. RINEBOLD.
Overton, Pa., Feb. 17, 1883.

STAR SAW-SET.

The goods I ordered of you some time since came in first-class order, and all are satisfactory. My brother says he would not take $2.50 for his Star saw-set, if he could not get another like it.
Bluffton, Ind., Jan. 29, 1883. D. F. VALENTINE.

I don't find GLEANINGS "flat," as Johnny across the big waters calls flatness; but it is in all points good, and worthy of all acceptation — so much so that every number is worth the year's subscription.
H. B. POMEROY.
Fayette, Fulton Co., O., March 5, 1883.

GLEANINGS, price list, and honey labels have arrived. Thanks for punctuality in sending. The labels are beauties, and all one could desire. We are having a cold winter in Oregon, and I don't know that I shall have any use for labels till I see whether my bees go through all right. E. S. BROOKS.
Silverton, Marion Co., Oregon, Feb. 12, 1883.

I received the smoker to-day. I did not look for one so large. Please accept thanks for sending so promptly. It was not much trouble for me to stop using tobacco. Your are doing a good thing. I am certain you will be rewarded. I fired mine up, and I tell you it made the smoke boil. In your prayers, think of your humble servant,— L. R. WEBB.
Salisbury, N. C., March 2, 1883.

Halloo, old friend Root! What is the matter? I don't see you these days. It must be the bees have been stinging you. If so, gargling oil is good. Well, this is a sharp winter. We are getting no snow on the ground yet. Raining some to-day; perhaps will wind up with snow. It has been 10° below zero at my place. But bees are all right so far. How are times? I have not made $5.00 for 3 months. Froze solid. D. F. C. HAMBLY.
Quincy, Plumas Co., Cal., Feb. 14 times, 2d month.

The last goods ordered came to hand in fine trim. As there were several Christmas gifts for my children in the package, I let them open it, and, sir, it made me feel happy to watch their faces, as one article after another was opened and received with joy. With the A B C my son handed me the "Dzierzon Theory." This made me smile, as I have been wanting it for a long while. Right after supper I sat down to read in it, and enjoyed following Mr. Berlepsch and his assistants all through the little book. They were watching day and night, engaged in earnest study to get at the truth, and at a time when the majority of the bee-keepers were rather against all new theories. I think we are all much indebted to them. To you, friend Root, my best thanks for sending me the little work. I find all the goods very cheap. They could not be bought here for double the money. My A B C sold the next day after it was received. Please send another one.
AD. MEYER.
Sweet Home, Lavaca Co., Tex., Jan. 26, 1883.

The goods you expressed me arrived on the 27th of February in fine condition; also the back numbers of GLEANINGS. I have tried the smoker, and am well pleased with it. It works excellently, and makes as much smoke as an old engine. I have not looked at the clover seed yet, but I know it is nice, and think when my bees see me coming with that little smoker they will not chase me back until I run into the cellar and shut the door after me. The sample of fdn. you sent is very nice. I expect to use it too after a while. I am feeding a few needy colonies, and for feed I make a syrup of cut-loaf sugar, and take 2 lbs. of sugar and dissolve it in a pint of water. Is that the way you would make it? I use the Shuck feeder, and feed at the entrance. Will that kind of feeding promote breeding?

RYE-FLOUR FEEDING.

I want to feed unbolted rye flour, as a substance for pollen; but the bees don't seem to mind it, nor go near it. Would you tell me how to get them to work on it? WM. F. GEIGER.
Beatty, West. Co., Pa., March 5, 1883.

[Your feed is excellent, but rather expensive, friend G. Just set a pan of rye flour or meal near where they are flying for the syrup, and they will very soon get started on it. After a few are started, you won't have any trouble, only to get meal enough. They won't touch it after pollen comes.]

Juvenile Gleanings.

MAR. 15, 1883.

Contents of this Number.

Bees, when Cross............182
Bees bet. Floor and Ceil'g..182
Bee-tree..................183, 187
Bees, Moving...................185
Bricks, Toy.....................177
Candy, Sticky..................186
Chestnut Honey...............179
Cotton-fields. 186
Editorials........................185
Hen Business...................183
Honey Candy............ ...179
Horse-talk......................178
Joseph's Mishap 179
Juv. Department..............178
Kind Words......................187
Letter from Bess...............176
Letter from an Orphan.....182
Myself and Neighbors 173
Pollen from Elm...............185
Premiums................. ..180
Red Lights.................... 178
Stabbing Affray...............179
Stings in Eye......... 185
Stone Covers....................183
Transplanting...................185
Victoria Fields' Letter......177
Virgil ... .174
"With what Measure," etc.177

I have declared unto them thy name, and will declare it.—JOHN 17: 26.

ALTHOUGH our boys have hitched the steam-engine to their machinery for making fdn. mills, and are turning them out at the rate of nearly two a day, still we are behind about 25 orders.

A CLERK is now employed to receipt all your orders the day they come; but this receipt does not imply that we have found your prices and orders correct. Very often the errors in prices are not discovered until the goods are ready to ship several days after.

THE call for sample copies has been so great that we have run out twice this year, and are now out again, and our only way is to send those who ask for them, some as far back as 1880. It is too bad, but I don't know how we can help it. All who want "fresh ones" will have to send us 10 cts., or else a whole dollar for a whole year.

I SHALL have to remind our friends again, that it is a penalty to send letters in any package they do not pay letter postage on. To-day we have received four watches, with a letter sent in the box with each one. It would cost you ten dollars each, friends, if we should report you. You have a right to say whom the package is from, but nothing more.

WE have finally secured, we think, all the alsike that will be wanted, and a nice article it is too; but we shall have to charge you 30 cts. per lb., $4.00 per peck, $7.75 per half-bushel, or $15.00 for a whole bushel. You see if we don't raise some alsike "our own selves," after this. We have clerks enough now to give it to you by return mail, express, or freight.

QUITE a good many of the friends are giving me long descriptions of the hives they have, asking what I would advise under the circumstances. With the present crowded state of our business, it is really out of my power to look into these things as I once did; and I am not sure but that if I could, I should advise, in every case, that you get rid of them all as soon as possible, and adopt the regular standard goods. The real honey-raisers are now all going pretty nearly in a beaten path; and if you are out of this path, the sooner you get into it the better; and then the A B C and our price lists will guide you at every step.

THE new maple sugar brought in this season so far has been of a nicer quality than any I ever saw before. The farmers explain it by saying the weather has been so cold there has not been the least tendency in the sap toward souring. We have quite a quantity in little cakes, very white and nice, that I can furnish you at 3 cts. each, or three cents more for postage, if wanted by mail. We have at present no new sugar in large cakes, that we can sell for less than 13 cts. It is so nice, I have paid 12 for most of it. Last-year's sugar, ordinary quality, we can sell you at 10 cts., or 9 by the barrel. As I have said before, our best sugar always sells first. Nice molasses, *first run*, $1.00 per can of 3½ qts.

REMEMBER, friends, that the price of fdn. changed at 12 o'clock at midnight, the 14th day of March. We sent to the postoffice and got the last night's mail, and marked all at old prices; but to-day all orders are to be filled at the advanced figures, according to our notice in Feb. GLEANINGS. One of our wax-dealers writes that dealers are getting wild about the advance on wax. We have secured a plenty for the present, but paid, in one instance, as high as 42 cts. to get it. Until further notice we will pay 35 cts. in cash, or 37 trade, for good fair wax. As I don't know how high it may run yet before the season is over, I would not dare to offer it for less than 42 at present, or 47 for selected wax.

Do you know that I am a great talker? Well, I am; and, what is more, next Monday we are to have in our office a short-hand writer who thinks she can write about as fast as I ordinarily talk. Of course, she will catch the words with her crooked marks only enough to get the matter down so she can read it; but after that she writes it out in full on a new type-writer of her own. Just think of it, children; instead of this laborious work of trying to scratch down what I would say to you (and I tell you the scratching, a great deal of it, is awful, as our girls can tell you), I shall only have to talk to this little woman, and, lo and behold! the talk comes out presently, nicely printed, and in good grammar. Do you see what education and skill will do?

AFTER very much trial and tribulation our artist has succeeded in getting a very good cabinet-size photo of your humble servant. My wife says it shows the wrinkles of much care and anxiety; but it seems to me it looks a great deal better than I ever did, so I feel very well satisfied with it. Well, I should be very glad to give you one apiece all round; but you see I some way happen to have such a host of friends, if I undertook the job, I am afraid I should not have money enough to build the new factory, just starting. I think we will fix it this way: Every subscriber to GLEANINGS who gets somebody else to subscribe may have one; or if you are too busy to hunt up one, just send us your own subscription for next year.

I SUPPOSE this is a busy world everywhere, and that it is quite a task to take the time to call things by their right names; but, friends, it would save a deal of trouble if you would, in ordering goods, call them by the names we have given them in the price list. Yesterday a man ordered some "pierced covers." What do you suppose it was he wanted? Why, after none of the clerks could tell, I suggested it was perforated zinc honey-boards; and as the price he gave agreed with this, we sent them along. Remember, your order may fall into the hands of some clerk who does not know bees very much, and has only his price list to depend on. If you call things by the same names they are called by in LETTERS LIKE THIS, in the price list, he can turn to them at once, and will know just what you want.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany.......................—
Bee Entomology.............195
Blasted Hopes................196
Editorials 202
Forgettery......................—
Heads of Grain..............186
Honey Column...............162
Humbugs and Swindles .....—
Ladies' Department 194
Notes and Queries...........194
Obituary..........................—
Remindery ....—
Smilery.........................195
" Square List" ....—
The Growlery...................—
Tobacco Column.............193

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Axtell's, Mrs. Letter.........182
Balance-wheels..............188
Banner Apiary 163
Bee-tree 193
Bee-keeping for Women....175
Bee-men in Trouble 171
Bees, Fastening in Hives...195
Bees, do they Hear?.........184
Bees in Wash. Territory....194
Bees on Rampage, etc......192
Bees in Cellar..................187
Bird-house......... 192
Blue Thistle 190
Box-Elders......................173
Bee-keeping, to Commence.192
Bee-trap, Pouder's..........166
Brood-rearing in Winter...191
Carson on Cyprians 170
Cement at Entrances 191
Chaff, Damp 187
Combs, Cleaning.......... .195
Crate, Walker's Combined..177
Cyprians, Vitality of 188
Cyula Linswik's Letter......164
Dan White.......................181
Dimmick's Buzz saw........167
Doolittle's Neighborhood..175
Drones, Killing. 170
Dysentery.. ....191, 192
Eggs Moved by Bees.........192
Enamel Cloth...................172
Entrances, Forming 186
Feeding during Dearth......169
Fevers 167
Fireweed........................194
Figwort, Marking Hills of..187
Figwort in North Carolina.188
Flour Feeding.................195
Foul Brood in Germany....171
Frames, Drilling..............188
Frames, Wiring...............189
Gallberry................179, 187
Gloves 194
Good, I. R., From...... 169
Heart's-ease...................186
Hives, Chaff...............187, 188
Hiving-Bag.....................193
Homeless Children...........169
Honeysuckles..................188
Honey-pails, Filling. 167
Honey from Corn............184
Honey, Palmetto.............187
Honey, Non-granulating ...189
Hubbard's Experience..... 168
Kepler in Texas..............190
Leaves, Forest...... 186
Mountain Sage 190
Nuclei, Starting..............190
Paraffine for Foundation....186
Poinsettia..................189, 193
Pollen, White..................191
Pollen, Chickweed...........194
Potato, Sweet 187
Premiums at Fairs..........185
Propolis, Poison..............188
Queens Lost on Bridal Trip.179
Queens, Two in Hive.........191
Queens, Clipped..............179
Salt for Bees..................195
Schultz' Experience.........178
Sections, 75 c. per 1000........186
Sections, ½-lb................ 181
Seps. or no Separators..180, 187
Silverhull Buckwheat......180
Shrew Moles...................195
Smoke for Stings 189
Square Men............... ..193
Sugar-cane, Amber..........190
Swarms, Caring for..........164
Swarms, Length of Flight..191
Swarming in February.....180
Taylor's Story................179
Thin Combs in one Section.176
Vannoy's Experience.......168
Veils 195
Ventilation, Sub-earth.....172
Ventilation, Upward 188
Vinegar from Honey.......192
Walker's Double Gift.......193
Water in Winter.............172
Wax, Plain Sheets of........174
Who should Keep Bees?.....175
Wintering Under Snowdrift193
Wintering, by Doolittle. ...172

ITALIAN QUEENS

Prices 25 per cent less than in A. I. Root's circular (due his reputation), and ready 1st of April. 100 queen-rearing colonies. DOLLAR QUEENS, and BEES BY THE POUND, a specialty.

C. B. CURTIS, Selma, Ala.
4d

HIVE MATERIAL.

I can make the 8-frame L. hive without portico for 45c. Same without cover or bottom for 30c. Honey-rack for twenty-four 4¼x4¼x2 sections, 20c. The above are all in the flat, ready to nail, made of good sound material. Can furnish in any quantity.
4d N. E. DOANE, Pipestone, Berrien Co., Mich.

WANTED.

100 WARRANTED ITALIAN QUEENS,

Delivered in fore part of May, at rock bottom cash price. Money ready. Queen-breeders will please inform me. WESLEY BALDUFF,
4d Milford, Iroquois Co., Ill.

FOR SALE.—Ten 1½-story hives, with 100 ready-made combs, built on wired fdn. All new last summer; 10 L. frames in each hive. Price $3.00. Address CHARLES E. PRICE, Smithtown Branch, Suf. Co., N.Y.

For Sale. A small cheap Engine, just right to run the Barnes foot-power machine. Is in good running order. Correspondence solicited.
8-4d ALBERT POTTER, Eureka, Win. Co., Wis.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 4tf
*Paul L. Viallon, Bayou Goula, La. 4ttd
*S. F. Newman, Norwalk, Huron Co., O. 4tfd
*Wm. Ballantine, Sago, Musk. Co., O. 4tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2
*Jas. A. Nelson, box 83, Wyandott, Wy. Co., Kan.5-5
*J. P. Sterrit, Sheakleyville, Mercer Co., Pa. 2-7
Bates & Miller, Barrington, Bristol Co., R. I. 2-4
*Chas. R. Mitchell, Hawkinsville, Pulaski Co., Ga. 2tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
*Dr. A. B. Mason, Wagon Works, Lucas Co., O. 2-8
*Jas. O. Facey, New Hamburg, Ont., Can. 2tfd
F. J. Wardell, Urichsville, Tusc. Co., O. 3-9
*S. C. Perry, Portland, Ionia Co., Mich. 3tfd
*J. H. Reed, Orleans, Orange Co., Ind. 3tfd
M. Isbell, Norwich, Chen. Co., N. Y. 4-9
*C. C. Vaughn, Columbia, Maury Co., Tenn. 4-8
*J. W. Keeran, Bloomington, McLean Co., Ill. 4-9

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 4tfd
M. S. West, Flint, Gen. Co., Mich. 1-6
T. G. Ashmead, Williamson, Wayne Co., N. Y. 4tfd
S. D. Buell, Union City, Branch Co., Mich. 2tfd
L. E. Mercer, Lenox, Taylor Co., Iowa. 4-3

SEND FOR PRICE LIST OF

Langstroth, Simplicity, & Chaff Hives & Supplies.

S. D. BUELL, UNION CITY, BRANCH CO., MICH. 4d

WOOD SEPARATORS

Price list of the Besse Wood Separators: For the wide L. frame, per hundred, 50c; per M. $4.00. Any size made to order. Send 3-cent stamp for sample.
4 DR. H. BESSE, Delaware, Ohio.

BEFORE you forget it, send your address to

J. P. MOORE, Morgan, Pendleton Co., Ky.,

and get his new price list of Italian queens, nuclei, and full colonies. Three Langstroth frame nucleus and tested queen, $5.00. 4d

E. T. LEWIS & CO., TOLEDO, OHIO,

Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian supplies. Send for circular. 1tfd

W. Z. HUTCHINSON

Rogersville, Genesee Co., Mich.,

has made arrangements to receive Italian queens from the South early in the season. The queens will be bred from imported mothers, reared by a thoroughly competent and reliable breeder, and upon arrival, they will be introduced to nuclei until needed in filling orders. These queens will be shipped as soon as it is warm enough in this latitude, probably about May 1st, and they will be used in filling all orders for untested queens until about June 15th, when queens reared in the home apiary will be ready to ship. Before June 1st, untested queens will be $1.50 each; during June, single queen, $1.25, or six for $6.00; after July 1st, single queen, $1.00; six queens, $5.50; twelve, $10.00. Tested queens (reared last season in the home apiary), before June 1st, $3.00 each; during June, $2.50 each; after July 1st, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 4tfd

IMPORTED QUEENS.

In April,	11	francs in Gold.
May and June,	10	" " "
July and August,	9	" " "
September and August,	7	" " "

No orders received for less than 8 queens. Queens which die in transit will be replaced only if sent back in a letter. 1-6d

CHARLES BIANCONCINI & CO., Bologna, Italy.

Full Stocks of

YELLOW BEES FOR SALE!

WARRANTED NOT EXCELLED.

J. M. MARVIN, 3-5d
St. Charles, - Kane Co., - Illinois.

SAVE MONEY!

Nuclei, 3-frame and tested queen	$3 50
Nuclei, 3-frame, untested "	3 00
Nuclei, 4-frame and tested "	4 50
Nuclei, 4-frame, untested "	4 00
Tested queens, after May 15	2 00
Untested queens, after May 15	1 00
Full colonies in Simplicity hives,	8 00

Will ship full colonies in April. I will guarantee every thing I send out to be first-class.

3tfd DAN WHITE, New London, Huron Co., O.

E. T. LEWIS & CO., TOLEDO, OHIO, Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

50 MIXED, or 25 TRANSPARENT; no two alike, or 25 GILT EDGE, with name, 10 cts. Circular of Novelties free. Pack of Authors, 15c.

3tfd J. TOMLINSON, Medina, Ohio.

1883 FOR SALE! 1883

Five-frame (Langstroth frame) Nuclei, consisting of a pure, young, fertile Italian queen, carefully bred from best imported or home-bred mothers, with five new wired combs filled with brood and honey, and covered with young bees. Better than a natural swarm. Send for circular and price list.

WILLIAM LITTLE, 3-5d
MARISSA, - - ST. CLAIR CO., - - ILLINOIS.

FLAT-BOTTOM COMB FOUNDATION.—High side-walls, 4 to 14 square feet to the lb. Circular and samples free. J. VAN DEUSEN & SONS,
Sole Manufacturers,
4tfd Sprout Brook, Mont. Co., N. Y.

WANTED, circulars from all Bee and Supply dealers, at once. ELIAS BERG, Cicero, Ind.

GIVEN'S

FOUNDATION PRESS

— AND —

WIRING MACHINES.

With this Press perfect foundation can be made in the wired frames, which will not sag, warp, nor break down. Samples and Circular free.

☞ For Particulars, address

D. S. GIVEN & CO.,
2-4d **HOOPESTON, ILL.**

HEADQUARTERS

In the West

Having fitted up our shop with new machinery, we are prepared to furnish all kinds of Apiarian Supplies; Simplicity, Chaff, Langstroth, and other hives.

ONE-PIECE SECTIONS, $5.00 PER 1000.

BEES and QUEENS.

DUNHAM FOUNDATION AT BOTTOM PRICES!

SILVERHULL BUCKWHEAT, $1.50 PER BUSHEL.

Job Printing done on Short Notice.

3-5d *LARGE NEW LIST FREE.*

BRIGHT BROTHERS,
MAZEPPA, - WABASHA CO., - MINN.

SEND FOR A Small Fruit
CATALOGUE TO OHIO RASPBERRY *A SPECIALTY.*
J. IRVIN JOHNSON,
PALMYRA, CHEAP.
WAYNE CO., - N. Y.

VANDERVORT COMB FOUNDATION,

ITALIAN, CYPRIAN, and HOLY-LAND QUEENS.

I. L. SCOFIELD, 3-8d
CHENANGO BRIDGE, - BROOME CO., - N. Y.

L. FDN. MOLD for $3.75.

ALSO

BEES FOR SALE IN IOWA.

50 to 75 Colonies choice Italians, from noted pedigree. These will be about as follows:—1 new painted Simplicity hive, worth $1.00; tested queen, $2.50; 2 lbs. bees, $3.00; 10 L. combs with brood and honey, $3.50. Total, $10.00. That is in April. In May, $9.50. June, $9.00; July, $8.00. Three-frame nuclei with tested queen, 1 lb. bees, 3 combs, brood and honey, one-half as much as full colony. Safe arrival guaranteed. My 156 colonies are O. K. to date. See new circular. OLIVER FOSTER.
Mt. Vernon, Linn Co., Iowa., Mar. 20, 1883.

AT KANSAS CITY, MO.,

I BREED PURE ITALIAN BEES FOR SALE.

Dollar Queens, in May	$1 50
" " in June	1 25
" " after June	1 00

Tested queens double the above prices.

Bees per ½ lb., same prices as dollar queens.

I *warrant* my *dollar queens* to be purely mated. I do not know that I have a single dissatisfied customer; but if there are any such, and they will write me in regard to the matter, I will do the best that I can to render satisfaction.

3tfd **E. M. HAYHURST, P. O. Box, 1131.**

PURE ITALIAN QUEENS,

Carefully bred from imported and home-bred mothers. Sent by mail. Safe arrival guaranteed. No black bees near.

1 untested queen before July 1,	$1.25; after,	$1.00
6 " " " " 1,	6.50; "	5.50

Tested queens, nuclei, and full colonies.

PLYMOUTH-ROCK FOWLS.—Eggs from this justly celebrated breed of fowls, $1.25 per setting of 13. Send for circular free. J. H. REED, Orleans, Orange Co., Ind. 3tfd

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THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan., 1883. Will guarantee safe arrival of every number.

A. I. ROOT, Medina, Ohio.

CONTRACTS WANTED WITH SUPPLY DEALERS,

Dealers, and those who contemplate becoming such, are requested to write for estimates on job lots of hives, sections, etc. We make *specialties* of chaff and Simplicity hives, but will make other styles, if unpatented, and ordered in considerable quantities. Let us know the kind and probable quantity of goods you expect to handle, as well as any other information you may deem necessary, and we will send you prices that we are confident will be satisfactory.

S. C. & J. P. WATTS,
10tfd LUMBER CITY, CLEARFIELD CO., PA.

MUTH'S HONEY EXTRACTOR,

SQUARE GLASS HONEY JARS,
TIN BUCKETS, BEE HIVES,
HONEY SECTIONS, &c., &c.

Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers." 1tfd

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J. D. GOODRICH, East Hardwick, Vt.,

MANUFACTURER AND DEALER IN

Supplies for the Apiary.

TWO-PIECE SECTIONS A SPECIALTY.

Always *firm* and *square*. Send for circular and sample section. 2tfd

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1883 THIRTEENTH YEAR. 1883

Italian & Syrian Queens.

Tested queens, in April and May,	$2 50
Tested queens, in June and after,	2 00
Untested queens, in April and May,	1 25
Untested queens, in June and after,	1 00

Sent by mail, and safe arrival guaranteed. Send for circular.

Address **W. P. HENDERSON,**
2-7dinq MURFREESBORO, RUTH. CO., TENN.

GEORGE W. BAKER,

—OF—

Lewisville, Henry Co., Ind.

Has 3000 New Illustrated Circulars (to give away) of

ITALIAN BEES, QUEENS,

Plymouth Rock & Brown Leghorn Fowls.

EGGS FOR HATCHING.

Also Extractors, Honey-Knives, Smokers, etc., etc. 3-2d

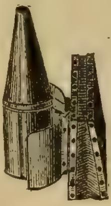
CARY'S ANNUAL CATALOGUE OF BEES AND SUPPLIES FOR 1883

IS NOW READY.

You should read it before making your purchases for the season. We offer you goods of very best quality, at very low prices. If you do not believe it, read our prices and send for a sample order.

Address WM. W. CARY & SON.,
2tfd Colerain, Franklin Co., Mass.

WARRANTED ITALIAN QUEENS, from hardy improved stock, $1.00 each; from imported mothers, 50 cts. extra. Satisfaction guaranteed. None of the new races kept in this vicinity.
2-7 W. H. PROCTOR & Co., Fairhaven, Vermont.



FOR THE

OLD RELIABLE

BEE-SMOKERS

or Uncapping-Knives,

Send card for circular to

BINGHAM & HETHERINGTON,
ABRONIA, MICH. 3-6d

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have; but at last I am "boss;" Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham & Hetherington.

Respectfully, G. M. DOOLITTLE.

OSAGE HEDGE PLANTS FOR SALE

At $2.50 per 1000; Honey-Locust, $3.00.

Sent to any address on receipt of price.

R. J. FISHER, 3-5d
NORTH RIDGEWAY, - ORLEANS CO., - N. Y.

The Excelsior Poultry Yards

are always well stocked with Pure-Bred Poultry and Italian Bees; Extractors, Foundation, Hives, etc., for sale. Job Printing of every description done cheap for cash. Circulars free.

Address J. T. FLETCHER, West Montery,
12-9d Clarion Co., Pa.

E. T. LEWIS & CO., TOLEDO, OHIO,

Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

Honey Column.

CITY MARKETS.

DETROIT.—*Honey.*—The demand for honey is but very slight, and there is a good deal for sale in the commission houses. Light comb honey is quoted at 16@18 cents; but concessions are made to effect sales. Dark honey is not wanted.

Beeswax. — Quoted at 26@30 cents, but is very scarce. A. B. WEED.

Detroit, Mich., Mar. 24, 1883.

CHICAGO.—*Honey.*— The nominal price of extracted is 7@9c here. The supply is abundant, and sales are slow.

Beeswax continues scarce. I am paying 30c for good yellow on arrival, and 17@25c for dark and off colors. ALFRED H. NEWMAN.

Chicago, Ill , March 21, 1883.

NEW YORK.—*Honey.*—Permit us to quote honey and wax as follows.

Best clover, in 1-lb. sections (no glass), per lb.,	22@23
“ “ “ 2 “ “ (glassed) “ “	18@20
Fair “ “ 1 and 2 lb. sections, “ “	17@18
Best buckwheat, in 1 lb. sections (no glass), “	16@17
“ “ “ 2 “ “ (glassed) “	14@15
“ white clover extracted in small bbls., “	10@11½
“ buckwheat “ “ “ “ “	8@9

Beeswax—prime yellow, per lb., 45c.

March 22, 1883. H. K. & F. B. THURBER & Co.

MILWAUKEE.—*Honey.*—The market here is quite dull in both comb and extracted, and slow sales of choice comb in 1-lb. sections, 18 to 19c.; large sections in good order, white, 16c. Broken or bad order, 10 to 15c. Extracted in tin cans, liquid state, and white, 12 to 13c. If candied, put up in pails or cans, 10c. per lb. Dark-colored honey, either comb or extracted, not wanted, and market favors the buyer. The stock is not very large. A. V. BISHOP.

Milwaukee, Wis., March 21, 1883.

CLEVELAND.—*Honey.*—Honey is a little lower with us, and at the decline has been selling more readily. Sales have been made at 18½ to 19 cts. for best white 1-lb. sections; 2-lbs. not so active, selling at 17 to 18; 2d quality, 17. Extracted very dull at 9 to 11.

Beeswax.—No beeswax in market. A. C. KENDEL.

Cleveland, O., March 21, 1883.

CINCINNATI.—No particular change in the market for honey and wax. The latter is scarce. The demand is good for extracted honey, with no change in prices. CHAS. F. MUTH.

Cincinnati, O., March 22, 1883.

I have about 300 lbs. white-clover honey in spruce kegs and large candy pails, well hooped, painted, and waxed, with covers. I will sell here on board cars for 10c. Packages, $1.25. N. A. PRUDDEN.

Ann Arbor, Mich., March 20, 1883.

DOES THE HONEY COLUMN DO ANY GOOD?

The six kegs of honey which you noticed in the Honey Column are all sold, and I have had calls for more. Please accept thanks. R. I. BARBER.

Bloomington, Ill., March 20, 1883.

CHOICE ITALIAN QUEENS from best strains obtainable. Safe arrival guaranteed. References given when desired. For prices, etc., see March GLEANINGS. C. M. GOODSPEED,

4d Thorn Hill, Onondaga Co., N. Y.

BEE-HIVES FOR SALE!

I manufacture every thing needed by bee-keepers, made of wood, not patented. I make Simplicity and Langstroth hives a specialty. My work is as good as the best, and my prices always please my customers. Send postal card for my illustrated catalogue.

H. F. SHADBOLT,

WINOOSKI, - - SHEBOYGAN CO., - - WISCONSIN.

Sweet - Clover Seed.

New and clean, 25 cts. per lb.

1-4 BEN CLENDENON, Grinnell, Iowa.

Recent Additions to the

COUNTER STORE.

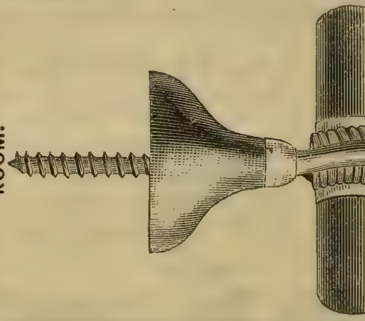
THREE-CENT COUNTER.

Postage]		Pr. of 10,	of 100.
4	STOVE-LID LIFTER	25	2 25
2	WARDROBE HOOK, same as in 5c counter, but without cone	25	2 25
2	PAINT, PASTE, or SASH BRUSH, No. 1	25	2 25
2	DRAWER-KNOBS, small, white porcelain	20	1 50

FIVE-CENT COUNTER.

8	TOOTHPICKS, wood; sharp at both ends; a box of 2500 for only 5c	48	4 50
2	TOOTHPICKS, quill, a bunch of 18 for 5c	40	3 50
6	COMB-CASES, tin, japanned	95	8 50

AND AN ORNAMENT TO ANY ROOM.



ONE OF THE HANDIEST THINGS YOU CAN IMAGINE;

3	WARDROBE HOOK or drawer-pull Beautiful finish in jet and nickel	45	4 00
3	SPICE-SCOOPS	45	4 00
5	FRUIT-CAN FILLER	48	4 50

This is a large-sized funnel, with a very convenient handle. A very convenient utensil for the purpose.

TEN-CENT COUNTER.

2	RUBBER BANDS, ¼ in. wide, doz. bunches	85	8 00
10	CARPENTER'S SAWS; nice for the boys, and handy for little work	85	7 50
18	PAIL, with cover, 4-quart	98	9 50

These are made for oyster-pails, but will answer nicely for honey. The cover slips over after the fashion of the Dadant honey-pail

9	HORSERADISH - GRATERS. Large, and strongly made	75	6 50

FIFTEEN-CENT COUNTER.

5	PAPER DUSTER or FLY BRUSH, made of colored tissue paper	1 35	13 00

Twenty-Five Cent Counter.

25	DISH-PAN, one solid piece of metal	2 25	20 00

Retinned, made exactly like the dipper as described below. Beautiful piece of work for the money. Holds 6 quarts.

16	DIPPER, very large size, retinned	2 00	18 00

This is made with strong riveted handle, suitable for dipping honey and maple syrup, and it will be found an extremely useful utensil on washing-days. As the whole is dipped in melted tin after it is finished, it has a bright silvery look, and might call forth admiration from any housewife. Holds 2 quarts.

Thirty-Five Cent Counter.

40	STRAINER PAIL, 8 qt. Nicely made	3 25	30 00
2	KNIVES FOR LADIES	3 25	31 00

These are made of the best razor-steel, hand-forged, and finished in best style. We have three patterns. First, Ivory handle, German-silver tips; second, Black horn handle, German-silver tips; third, like the last, only longer, and with 2 long slender blades. Specially adapted to cutting out queen-cells, and we term it our "queen-cell" knife.

FIFTY-CENT COUNTER.

14	LADIES' RUBBERS	4 50	42 50

Light, but nice to keep one's feet clean. We have sizes from 3 to 7. Number 6 is exactly what I use when I run out in the mud.

	Strainer pail	4 75	45 00
9	Clothes-brushes All bristles, and well made,	4 00	37 50
40	Dinner-pails, oblong, square		

Contains a can for coffee, tray for pie, etc., and drinking-cup. Very convenient.

A. I. ROOT, MEDINA, OHIO.

IF YOU WISH TO PURCHASE

THE BEST BEE - HIVE IN THE WORLD,

SEND FOR DESCRIPTIVE CIRCULAR TO

C. H. FRONCE, ERIE, PENNSYLVANIA.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES, HONEY & HOME INTERESTS.

Vol. XI. APR. 1, 1883. No. 4.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

Established in 1873.
PUBLISHED MONTHLY BY
A. I. ROOT, MEDINA, OHIO.

Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18c per year extra. To all countries NOT of the U. P. N., 42c per year extra.

NOTES FROM THE BANNER APIARY.

NO. 41.

CONTINUED FROM LAST MONTH.

MR. ROBERTSON went with me on my journey as far as Ionia. Here I spent two hours in visiting the State House of Correction. The afternoon train was three hours late, and it was eight o'clock in the evening when I arrived in Lansing. The legislature was in session, and the great Capitol building, with a flood of light streaming from its many windows, made a beautiful picture with the blackness of night for a background. But I was too tired for sight-seeing, and sought the spring bed of the hotel. With the Newhall-House horror fresh in my mind, I was thankful that I was given a room on the first floor.

The next morning I trudged the four miles out to the Agricultural College farm, only to find Prof. Cook away from home. Not knowing positively when he would be at home, I took the next train for Battle Creek, and was soon seated by a cozy fireside, and having a pleasant chat with B. Salisbury and wife. Friend S. does not keep bees so extensively as many bee-keepers, he also being engaged in the manufacture and sale of health-reform garments for ladies; but he has all of the modern improvements, and raises extracted honey, which he retails at 15 cts. per pound. He thinks this pays him better than raising comb honey. He uses the Langstroth frame and chaff hives.

It is probably well known that the Seventh-Day Adventists have their headquarters at Battle Creek; and although not connected with bee-keeping, two of the pleasantest hours spent while on my trip were those in which, with friend S. for a guide and companion, I visited their publishing house, tabernacle, and sanitarium. We first went to the publishing house, where may be found an improved engine, improved presses, paper-cutting machines, machines for ruling paper, arrangements for marbling and gilding the edges of books, electrotyping and stereotyping departments, and editorial room with its well-arranged book-cases and desks; in fact, the building contains the thousand and one wonderful machines and processes to be found in a large printing and publishing house, all of which need to be seen to be understood and appreciated. The sanitarium is a large brick building, four or five stories high, heated by steam, lighted by gas, and furnished with almost every known appliance for the treatment of diseases. A visit to the different departments of this institution, to its bath-rooms, dining-rooms, laboratory, etc., almost made me wish that I were sick, "just a little," so that I might have an excuse for indulging in all these luxuries.

From Battle Creek I went to Dowagiac, where I was warmly welcomed by James Heddon and family. Friend H. has 500 colonies, which is probably a larger number than is owned by any other bee-keeper in the State. Having commenced keeping bees 14 years ago, and having made a specialty of the business, and given it his best thoughts, it is not to be wondered that he stands in the front rank of Michigan's bee-keepers. There was scarcely a topic that came up for discussion, during our three days' visit, in which he was not perfectly at home – he had "been there," and could tell all about how it turned out. During the past two seasons he has had with him a small class of students learning bee-keeping, and he is making arrangements to accommodate a still larger class the coming season. Fortunate indeed will be the young man who wishes to make a profession of apiculture, if he can pass one season in the apiary under the instructions of friend H.

THE L. FRAME, AGAIN.

Friend H. uses the Langstroth frame, and gives the following reasons for his preference: The shallowness of the brood-nest induces the bees to enter the boxes more readily; there is more room for boxes over the frames, and they are used by the majority of bee-keepers. Were *I* starting an apiary, I should certainly adopt the L. frame; and as it is, I am thinking quite seriously of laying aside my American frames for the L. I shall certainly give the L. frame a trial the coming season.

A STRONG ITEM IN FAVOR OF ½-LB. SECTIONS.

Friend H. will use the half-pound section quite extensively the coming season. He says there is certainly one good point in their favor; and that is, they can be shipped almost anywhere by freight, with but little danger of injury.

From Dowagiac I went back to Lansing, where I not only found Prof. Cook at home, but confined to the house by a rheumatic attack. Prof. C. was busy reading the "proof" of the revised edition of his "Manual of the Apiary," which he has entirely rewritten during the past winter, adding much new matter, many new engravings, and somewhat enlarging the work. The first edition will be out some time in March, and will be impatiently waited for and eagerly read by the professor's numerous bee-keeping friends. Prof. Cook uses and advocates the Gallup frame, as he considers it the best shape for rapid handling, and for allowing the bees to cluster in a compact form.

Through the kindness of Mr. Babcock, a young man who came over from England to learn bee-keeping, but finally decided to take a full course at the college, I was shown the college apiary, or, rather, the evergreens that shade the hives in summer, for the bees were in the cellar. He also went with me to Prof. Cook's study, where a fine microscope, and some mounted objects showing different parts of a bee, so charmed me that it was with difficulty that I tore myself away long enough to visit the museum of stuffed birds, beasts, and reptiles, of bugs and butterflies, of skeletons, and of the thousands of interesting objects that lack of space forbids mention. After spending one night and one day under the roof that shelters the happy Cook family, I took the evening train for Flint.

Early the next morning I called upon August Koeppen, a German who keeps a small apiary. Not only the walls of the hives, but the bottom-boards, are made double, and filled with *tow*. I was interested in examining a large home-made extractor, capable of receiving six combs; an automatic arrangement can be used for turning the combs inside the can.

From Mr. Koeppen's I went to Mr. M. S. West's. Like some other very successful bee-keepers, friend W. never writes for the bee-papers, and does but little talking; but, as friend Heddon expresses it, he is one of those who "get there." He uses both L. and Gallup frames, and raises comb honey.

BEE-KEEPING FOR WOMEN.

Last June Mr. West was taken sick with typhoid fever; but so conversant was his daughter with his business that she not only cared for the bees, something toward 100 colonies, all through the swarming season, but she successfully carried on his local supply trade. Tally one more for the ladies.

A PROFITABLE KIND OF CONVENTION.

Brother bee-keepers, if you can, go and visit the most successful bee-keepers that you know, and you will never regret it. For the purpose of gaining practical information, these "conventions of two," if the right persons are chosen, are better than the hurly-burly of a convention 100 strong.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., Feb. 17, 1883.

SWARMING IN LARGE APIARIES.

The Easiest and Most Expeditious Way of Caring for the Swarms.

OUR FRIEND CYULA TELLS US OF SOME OF THE TROUBLES THAT BESET BEE-KEEPER-"ESSES."

MRS. HARRISON will please accept thanks for her kind and explicit answer to the question I took the liberty of putting in Feb. GLEANINGS. I am sure that more than one of our bee-keeping sisterhood will be helped, and that all will have shared my own keen interest in this glimpse of Mrs. Harrison's management.

Mrs. Harrison's dish-pan may not be quite as convenient as the light willow baskets, lined with burlap, and provided with a cover of the same, which are used by Mr. Heddon; but the former article has the advantage of being already within the reach of every bee-keeping woman. I would suggest, however, that Mrs. H. probably used her pan with the addition of a cloth lining; as otherwise, on a bright hot day, it would become so heated by a few moments' exposure to the sun that her bees — if like our bees — would boil over and out of the pan too quickly to be easily carried many steps.

For swarms so considerate as to cluster where they can be easily shaken down and into some convenient receptacle, Mrs. Harrison's plan will work admirably; but for a swarm spread over the shaded side of a stump, or a swarm weighing down asparagus-stalks or pea-vines until, before the cluster is formed, a goodly portion of the bees are spread upon the ground, and inextricably mixed up at the base of the stems which one is forbidden to pull up, for such a swarm I think I should prefer a light hive, with shaded entrance invitingly wide, and the use of a little strategy to induce the bees to go in and take possession, of their own free will. I think I should prefer this, even if I were obliged to carry the hive to the bees alone.

In the early days of our bee-keeping, Nellie and I supposed that the well-informed bee-keeper-"ess" always divided her colonies instead of allowing them to swarm; and for three summers our practice conformed to this theory, with exceptions when the bees did not happen to agree with us. By the fourth summer we had decided to make natural swarming the rule, and dividing the exception; a decision to which we have since adhered. From the first we have practiced clipping our queens' wings, although each season there has been, for one reason and another, a few exceptions. For some time we caught our returning swarms in a new hive on the old stand, and carried the old hive to a new stand. Our hives were not as large and heavy in those days as now, nor did we have as many colonies; so that Nellie and I together were able to manage it, but with much difficulty, sometimes, it must be confessed.

When I read the letter of the sister who so emphatically pronounced bee-keeping too hard work for women, I inferred, from what she said relative to moving hives heavy with honey, that she had been making the same mistake which was being made in our apiary seven years ago. For to change the place of the old hive was a serious mistake—and that quite apart from the question of more or less hard work.

Removed to a new stand, the brood-combs in the old hive are often left quite too bare, in case the day be succeeded by a chilly night. I believe, too, that there may be truth in the suggestion, once made to us by an experienced bee-keeper who had noticed the mysterious disappearance of uncapped brood in such cases, viz., that the too scanty guard, unequal to the task of caring for all, adjust their duties to their powers, and compassionately (?) save the younger larvæ from being chilled or starved, by devouring them alive. If the old hive be left on its stand, bees returning from the field, and strays from the swarm, will keep the remainder safe.

I do not think we have made the mistake of moving the old hive to a new stand for the past six years. While our regular practice with respect to hiving swarms during this time has been as given in Feb. GLEANINGS, we have had a deal of *irregular* practice thrown in. Nellie once cut a sturdy little beech-tree nearly through with a hand-saw while an enormous swarm quivered and swung about her head, threatening to drop with every jerk caused by the pinching of the saw in her unskilled hands. And then, together with the help of a rope, we managed to bend the tree till the swarm was safely shaken off. We have taken dozens of swarms from stumps; we have gathered them from rail fences, and shaken them from cherry and pear trees. I hesitate to say, but it is the simple truth, Mr. Editor, that I once caught a swarm which came out just before the beginning of a light summer shower, under an umbrella. (There! I meant to have saved that story to tell your little folks in JUVENILE.) We lost two swarms last season; in each case, of course, because the queen had wings. One settled in the top of a tall hemlock, and two men from the field, with Nellie to superintend, spent half the forenoon in a vain attempt to secure them. The other swarm also went to the edge of the woods and clustered beyond reach on the body of a tree. It was necessary that a staging of some kind be provided, and Richard was petitioned to carry over a barrel, let down the fence, and clear away the under-brush, so that Nellie and I could secure the bees. But dinner was ready, and Richard — just from the hay-field, tired and hungry — thought the bees might wait upon his pleasure a little; and, of course, the bees did not wait.

One memorable day last summer we had eleven swarms — the most swarming we have ever had in one day. Two of the eleven had queens with wings, and these two swarms gave us more trouble and more hard work than all the rest put together.

Although we prefer to catch our swarms on the old stand, still a swarm showing a disposition to cluster in an exceptionally favorable spot is in no danger of being refused the privilege. We give them their queen, and hive them where they happen to be. But we get through more quickly, which sometimes saves strength by giving time for a little rest, if the swarm returns without clustering. Mrs. Harrison says that our way may be as easy as any where there are two to do the lifting, but certainly not where there is only one. I do not claim that it is. I am very sure that for women of less than average strength, and especially for women who, like one I know of, are about engaging in the business with the hope of thereby regaining health and strength, there ought to be a far better way. But this better way would not be for me, even if working alone, that described by Mrs. Harrison. With our surroundings, it would not do unless our bees were more habitually considerate than they have hitherto shown themselves to be. And there may be others, similarly situated, whose experience has led to the same conclusion. But if the Brooks swarm-catcher will do what was claimed for it when first introduced to notice in GLEANINGS, why may not the advantages of both methods be combined by the woman who works alone? She can avoid lifting hives, as Mrs. Harrison does, and she can avoid the trouble which in a location like ours would inevitably result from leaving her queens' wings unclipped.

But, does the swarm-catcher do what was claimed for it? If any sister has tried it, will she please give her experience? The objection which has occurred to me is this: That the appearance of the old hive must be so changed that the tendency to enter adjoining hives, sometimes manifest on the part of a returning swarm, will be greatly increased. We have always found it easy to guard against this tendency; but I have feared that, with the swarm-catcher, it might become a more serious difficulty. If any sister has a better way of managing, will she please give us her method?

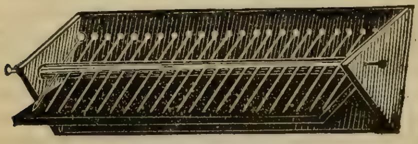
It is a practical and serious question with me; for though Nellie has relented so far as to say that I may keep ten colonies, she gives me no promise of assistance. Nellie reminds me that Mrs. Harrison's special advice to us calls for a little personal explanation on our part. But that must wait for another time. I will here only express my thanks for the good feeling and kindly interest which, I am sure, dictated it. CYULA LINSWIK.

March 20, 1883.

And many thanks to you, good friend Cyula, for so fully explaining to us the difficulties that lie in the way of bee-keeping for women. Your location is a little different from that of most of us, for we have no tall trees within almost a quarter of a mile of our apiary, and there are, in fact, few trees of any kind, except small evergreens. I often think of you and your forest home, and I have thought, too, I should dearly love to pay you another visit, but am afraid I never shall, if you give up the bees. I am very glad indeed to hear that sister Nellie has relented so much. In behalf of the brothers and sisters, I tender her my best thanks, and methinks I can see now that peculiar smile of hers that I just caught a few glimpses of during the brief hour of my visit. By all means, give the juveniles that story, and tell it very plainly, too, just as you know children like to have stories told. With the children of to-day lies the future of our country, and we don't want them all to leave the country and go into the cities.

HOW TO GET THE BEES OUT OF THE SECTIONS.

I HAVE tried the plan described by friend Myers, in the Feb. GLEANINGS, and my "educated robbers" will find the way in behind that wire cloth. My plan is to prepare a close-fitting box with an entrance (or, rather, place of exit) similar to that of the chaff hive; over this entrance I have arranged a sort of trap so that the bees can pass one way only. Take a wooden bar about the size of a lead-pencil, and put through it a row of common pins, about 7 to the inch; this must be swung on pivots, so that the pin-points may rest on the "jumping-off board."



POUDER'S BEE-TRAP.

Just place your comb honey inside of this box, and no more is required. Now, friend Root, is the idea old, or is it too much machinery? I know it works well, for I have tried it.

We want some one to invent a little bucket for the bees to carry when honey is abundant. Wouldn't that be nice, to see them skip out so early in the morning, and bring back honey by the pailful?

WALT. S. POUDER.

Groesbeck, Ohio, March 24, 1883.

Many thanks, friend P. Your idea is old, but you have given us quite a simple way of making it, as well as a very good drawing. If there is much demand for them, I think we might get them up of tin for about 25 c., or 35 if sent by mail.

HOW TO COMMENCE BEE-KEEPING.

WHAT KIND OF AN OUTFIT IS REQUIRED FOR ONE HAVING, SAY, HALF A DOZEN HIVES?

I HAVE been telling you, friends, of the large amount of correspondence ahead of me this present season; and especially has matter been accumulating from those just beginning bee culture. When I found it impossible to answer these inquiries as they should be, or even to dictate the answers, I sent for our old friend Mr. House, whom I presume many of you know, and he now sits ready to answer inquiries of every description from young bee-keepers. As an evidence of Mr. House's ability to advise intelligently, we will remark what he did the past season with 12 colonies of bees—12 strong and 2 weak swarms. Increased to 32 strong swarms, and took 3000 lbs. of surplus, nearly all of which was comb honey—an average of 214 lbs., and one new swarm per colony. As an illustration of his part of the work that he has to do, I give the following from a young friend who is just commencing, and below it is a reply:—

A FRIEND THAT "WANTS TO KNOW, YOU KNOW."

You say you could not send me such goods as would suit me, unless I knew just what I wanted, and sent for the exact goods I needed. Now, it was for the express purpose of obtaining that information that I wrote to you. Again, you say, if I use sections I shall need either a case or wide frame to hold them in. I supposed as much; but I wanted to know which of the two I needed, and how many for the five hives.

You close by telling me, that when I know just what I want, you will gladly fill my order. I do not doubt it in the least. But how am I to know?

I read much of frames, cases, sections, separators, etc., but never saw any of them, and know nothing about using them, being wholly inexperienced in every thing pertaining to *improved* bee culture. I suppose you will say my head is thick. Well, I don't know a great deal, but what little I do know, does me lots of good.

W. S. G. MASON.

Morenci, Mich., March 26, 1883.

I really beg pardon, friend Mason, if any of our replies have seemed uncourteous, and we submit to you Mr. House's estimate of what would be needed for half-a-dozen hive apiary:—

Friend Mason:—

The only way out of the difficulty that I can see is to make an estimate of what we would advise for a person who has a half-dozen swarms. By this you will not only see what we recommend, but will have the prices opposite. Then if you order as we make estimate, you can return this to us.

10 two-story Simplicity hives (*i. e.* 20 one-story hives), @ 43c.	$ 8 60
This will include 10 bottoms and 10 covers, all in flat.	
100 metal-cornered frames, pierced, with wire, etc., to hold fdn	4 00
100 wide frames for sections in 2d story	3 00
1000 sections, 4¼x4¼	5 00
200 tin separators @ 1¾c.	3 50
10 division boards put together @ 10c	1 00
15 lbs. fdn. for brood frames @ 55c	8 25
5 lbs. fdn. for sections 3¾x3¾, thin worker, @ 65c	3 25
1 honey extractor, No. 5, for L. frames	7 00
1 Novice honey-knife	70
1 Smoker, Clark's	50
1 Clark's starter machine	50
1 soldering iron, for putting fdn. in frames	50
10 sheets enamel cloth, tinned @ 10c	1 00
1 pair iron gauges for putting hives together.	1 00
7 lbs. 6d casing nails @ 6c	42
1 " 4d " "	06
2 " ¾-in. wire " @ 20	40
1 " ⅝-in. " "	22
1 " 1-in. " "	18
Total	$49 08

We advise an extractor even for comb honey, in order that there may always be room in the brood-chamber. Even in this way it will very soon pay for itself.

A. I. ROOT, *per* "*H.*"

Medina, O., March 28, 1883.

Inasmuch as hardly any two bee-keepers agree in little details in regard to the management, it is quite difficult to make an estimate. For instance, a great many would prefer the 1½-story hive, with a case for sections, instead of the upper story with wide frames, as Mr. House has figured it. The season, also, has much to do with it. During a poor season, fifty dollars' outlay for half a dozen colonies would be very likely far more than needed; but with such a flood of honey as our friends in the West have had for the past year, the above estimate might not be nearly enough. It will also be observed, that quite a part of the above order is for goods which, like the honey-extractor, knife, etc., should last a bee-keeper a lifetime. Unless bees are sold, hives would also come under the above head; and most that would be needed after the first start would be sections for honey, and hives, frames, etc., for increase in stock.

MRS. HARRISON TALKS TO US ABOUT FEVERS,

AND GIVES US SOME WHOLESOME ADVICE.

FRIEND SMITH, can you not get along without quinine in Georgia? My remedy for "an ordinary fever" would be a pack. Spread two comforts and a blanket on a lounge, and then wring out of hot water a sheet, or, better, a woolen blanket, and spread it on. It is well to give the fever patient some hot herb-tea, sage or pennyroyal, and then wrap him up in the hot sheet, raising the arms and putting one half of the sheet over the body, and then putting them down and drawing the other half over. The blankets and comforts should be drawn tightly and tucked in snugly, especially around the neck and shoulders. A hot soap-stone should be placed at the feet, and a cool cloth at the head. The work should be done quickly and well, so that the patient will be warm and comfortable. Let the patient remain half an hour, or longer, if sleeping, and then unwrap and wash off in a tub of tepid water, wiping dry, and going to bed. My husband says he is "in heaven" while in a pack.

I have had the "bee-fever," several very violent attacks, followed by *chills*. Out under that catalpa-tree in our yard is a remedy. It is a vicious colony of hybrids, and very likely the queen visited a drone of the Cyprian persuasion, belonging to a neighboring apiary. Trespass on that queen's domains, and the temperature of bee-fever falls immediately. It is wonderful, what a powerful antidote it is.

The weather here at the North is also a wonderful antidote. The winter of 1880-'81 cured more persons that were badly afflicted with it than any thing I ever heard of. The honey market, too, is a *cooler*. I have sometimes thought that it was the most powerful known remedy, where the market was overstocked, and sales dull and slow. If none of these things break the fever, let it run its course. Like all other fevers it will wear itself (or the patient) out.

MRS. L. HARRISON.

Peoria, Ill., March, 1883.

THE WAY FRIEND PETTIT FILLS HONEY-PAILS.

ALSO SOME GENERAL HINTS IN HANDLING EXTRACTED HONEY.

ON page 82 you ask about filling honey on our circular table. I fear the answer will be too long, and cover too much ground. When first extracted, my honey is thrown into large tin tanks that will hold about 1000 lbs. of honey each; these are covered with cheese-cloth, and allowed to stand some time before the honey is filled into cans, etc., for market. I now place a 30-gallon milk-can, such as dairymen use for sending their milk to the factory, beside one of these storage tanks, and with a tin dipper* (after thoroughly stirring the honey to make it all alike) I proceed to fill the milk-can. I place a tin with raised sides and drooping ends over the tops or edges of these cans, to prevent the honey dropping between the cans. The milk-can should stand on a low truck, on which it is moved to the circular table, and is then raised to the desired height by means of rope and pullies, and is then lowered upon a box of suitable size.

Now, friend Root, imagine yourself placed upon a chair, with your left side toward the table, and the milk-can right in front of you. Now fancy you hold a Jones honey-pail in your left hand under the honey-gate in the milk-can, while you open the gate with the other, and you have a vivid picture how we do it in our honey-house. If this letter be read in connection with one cited on p. 82, I think all will be clear. Honey ranges itself, so to speak, into layers according to density; and, therefore, to have the packages all alike, it should be well stirred immediately before being filled into packages.

S. T. PETTIT.

Belmont, Ont., Can., March 14, 1883.

A HOME-MADE HAND-POWER BUZZ-SAW.

THE WAY FRIEND DIMMICK GETS HIS POWER.

I NOTICE that considerable is said in GLEANINGS in regard to hand-power buzz-saws for making hives and their appurtenances, discussing the different modes of construction, expense, etc. I have one of my own construction and make, which I have used for 12 years; and although quite inexpensive, it has answered my purpose admirably. Of course, I would not recommend it to those who make a business of making hives, sections, etc., to sell; but for individual use, I think it comes the nearest filling the bill of any thing of the kind I have seen or read of yet; at all events, I will venture to give your readers a brief description of its construction. I presume some will think they would prefer something more complicated and expensive. All such will have the privilege of improving upon it, or devising something better; and if they should succeed to any great extent (taking all things into consideration), be assured I shall be one of the first to adopt the improvement.

Now, in regard to its construction: I first make a wheel 6 feet in diameter by halving together in the center a couple of 2½x3½-in. hard-wood scantling, 6 feet long, making 4 arms to support the rim; cut a 1x3-inch tenon on end of each arm to fit the rim to; for the rim, cut out basswood felloes (with scroll saw), one inch thick and 3 inches wide; length, 1-12 the circumference of the wheel. I used 4 courses of these felloes, alternately lapping the joints of each course, and fitting them to the tenons of the arms, and nailing the 4 thicknesses firmly together, thereby making a rim 4 inches wide and 3 inches deep. For shaft to wheel, I used 1-inch iron with collars and nut, and fitted at each end to receive a crank, the same as is used for grindstones; hung the wheel to a couple of 3x4-inch scanting, set upright and parallel; fastened securely at top and bottom.

Second, I made an adjustable saw-table to my own liking, very much like the one described in A B C; fastened to table a belt-tightening pulley with lever attachment; set table about 5 or 6 feet from wheel, running a 2-inch belt direct from wheel to pulley on saw-mandrel, which is 2½ inches in diameter, and here you have the whole thing complete.

To do a short job of two or three hours' work, one man or boy will turn it easily, but for a good strong day's work, it is better to have two to turn. Boys in the neighborhood frequently come in and volunteer their services, thinking it just fun to turn, and see it cut out the stuff. I generally have a man or two on the farm, and in stormy weather we can go in and cut out all the material I need in a very short time. Now in regard to the expense, I will say that 3½ days' labor completed the whole thing, ready to run; and any one can estimate for himself the small amount the material would cost; the saws, mandrel, and belt, being the most expensive parts. I will here state, that after using this power for a time I thought to improve it; I therefore attached a 16-in. wheel to the frame under the table to attach the main belt to, attaching a 6-inch pulley to the shaft of this wheel, and running another belt from this pulley to the pulley on the mandrel; but I found it too complicated, with too much friction to overcome easily, and therefore discarded it.

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* The dipper is made of heavy tin. It is 4½ inches deep; diameter of bottom, 6 in.; diameter of top, 9 in. Handle is 3 ft. long and 1½ inches in diameter. A suitable hook is soldered on the under side of the lower end of the handle about 4 inches from the bowl of dipper, so that when the dipper is not in use it can be hooked upon the top and inside of the honey-tank.

H. V. N. DIMMICK.

Hubbardsville, N. Y., March 8, 1883.

Many thanks, friend D. I quite agree with you in your decision, that a large wheel bolted directly to the saw-mandrel, gives the best results; but I would have the large wheel set enough lower than the table, so the belt would not interfere with cutting off wide boards, etc. To get it handy, this large wheel might be let into the floor, and a place fixed to stand in while turning by the cranks.

DOWNS AND UPS IN BEE CULTURE.

HOW FRIEND VANNOY SAVED HIS LAST COLONY.

IN the fall of 1880 I went into winter quarters with three colonies. They lived until February, when two died. In March, 1881, we had a very deep and wet snow. Having the erysipelas in my foot I could not go out to attend the bees and clean away the snow for several days; but I finally got out and opened the hives, and to all appearances the bees were dead. In looking over the comb I found the queen dead. I examined her, and laid her on the cross-bar of the sash in the window, feeling terribly out of sorts.

Some time after that, a bee flew across the house to the window. I said to my wife, "Where did that bee come from?" She said it was one that fell on the hearth, and told me to bring the others in, and said that they would nearly all come to, also; but I remarked, that it was of no use, as the queen was lying in the window, dead. She said, "May be she will come to;" and taking the queen in her hands she began to blow her breath on her. I told her it was of no use, as the queen was dead. She said, "You try," and handed her to me. My faith was very weak, although I held her in my hands, and blew my breath on her, and held her between my fingers to the fire. But finally she moved one leg. I remarked, "This thing *has* life in it, after all."

My wife then said, "Bring in the bees." So I spread down a quilt and a sheet over it, and brushed off the bees, and I guess about a quart came to. I placed them in the hive and kept them in the house, and fed them until the weather was warm. By this means I learned that it is not unlawful to feed bees; so I fed them up and made two swarms by artificial swarming. This was in the summer of 1881. One died the next winter, so the spring of 1882 found me with two strong stands, as I had learned better how to take care of them.

FROM 2 TO 32, AND DONE BY AN A B C SCHOLAR "TOO."

Last year being one of the best years for bees, and having two good stands to start from, in June, as soon as drones began to hatch, I swarmed the best hive, and intended to let them alone; but on looking at them the next day I thought, "Too many bees yet to do well." So I swarmed them again and filled the space with comb, taking it out of the one that died in winter. Three days afterward they swarmed naturally. I did not book dates, as I never thought of reporting; so from that on until the weather got cool they swarmed naturally, or I would watch them and swarm them artificially, as they would need. In the fall I had 32 stands; sold one, or gave it away, and doubled two, and we went into winter with 29 in good condition; lost two up to date.

The bees are flying lively to-day, and have been for several days. This month my bees gathered a good lot of honey, to be divided as much as they were. I got 300 lbs. of extracted honey — the first I have had since I kept bees. This may look "fishy," as some of your writers call it, but it is true, nevertheless.

R. M. VANNOY.

Vannoy Mill, Pike Co., Mo., March 9, 1883.

FROM 7 TO 35 BY NATURAL SWARMING.

ALSO SOMETHING ABOUT HAVING THE CHILDREN HELP.

YOU may set me down as a beginner in the bee business. One year ago last fall I had eight weak colonies in chaff hives, tucked away for the winter as near your directions as I could, with the means I had to go on with. They all came through the winter safe, but of course they were not very strong. So I got some sugar, and made candy according to your directions, and hung in the hives in March. They went right to raising brood; and by the time the fruit-trees were in bloom the hives were pretty well filled up with young bees. But we had a freeze here that killed nearly all the bloom, so it was quite a drawback to the little fellows; and before I was aware of it I found a good many of them dead, and scarcely any thing in the hives for them to live on. But I assure you it was not long before I had some more sugar for them. But I missed it by not feeding them sooner. They all came through at last, but it made them a little later about swarming, I believe; but when they did begin to swarm, they went at it in earnest. I had, as nearly as I can remember, about *thirty-five* swarms from 7 hives. I tried to prevent them from swarming so much; but I failed in nearly every effort I made. I moved the old hive when the first swarm came off, and put the new one in its place; but still they swarmed in spite of me; and in a short time the new colony would swarm too, as many as three times, and the old one from three to five times. I believe I could have managed them better if I had had time to attend to them; but my business on the farm was such that I couldn't do it; and as I was short of means I wasn't able to hire any help. I made a few hives by hand, and it was such a slow way that I couldn't spare the time to make as many as I needed; so I just increased from 7 hives with the one that didn't swarm, to 21 hives; and when I put them away for winter they appeared to be very strong, and they appear to be doing all right.

Whenever there is a day warm enough for them to fly they are out very strong. If I had had time to make the hives, I could have had ten more swarms. I had to double them up a good deal to get them into the hives that I had, and I also lost several swarms that went to the woods. By their swarming so much I got very little honey; but I am not a bit discouraged, for the increase will more than twice pay me for my little bother with them, and it is quite a pleasure to me to work with the little fellows, even if they do use their stings on me once in a while.

SETTING THE CHILDREN AT WORK.

I received those saws and the mandrel, and I am well pleased with them. I have got my rig fixed up to run by horse-power, and it is almost play for me and the boys to cut up lumber for hives. I have six boys and three girls, and I feel that there is a good deal of responsibility resting on me to lead those little ones, with whom God has blest me, in the right direction. My oldest child is 16, and he has already embarked on the old ship of Zion. Friend Root, I feel bound, by the assistance of the good Being, to set a good example before them, that they, too, with me, may meet their mother who has passed on before us. Oh what comfort it is, when we have to part with loved ones here, to think that, if we are only faithful, we shall again meet where Jesus is, never to part again! D. P. HUBBARD.

Graysville, Monroe Co., O., March 5, 1883.

OUR OLD FRIEND I. R. GOOD.

WHAT HAPPENED, WHAT HE DID, AND WHERE HE IS NOW.

ABOUT the first of March we got a letter from friend G., and it read something like this:—

I have lost about 100 colonies of bees; every one that I used for queen-rearing last season is dead. My hopes are not blasted, but I am thinking very strongly of emigrating to Tennessee or Alabama.

Napanee, Ind., March 6, 1883. I. R. GOOD.

In reply to the above, I wrote as below:—

Don't do it, friend G. You haven't got fairly initiated yet.

To which he replied:—

You say I haven't got initiated yet. How many degrees are there in bee-keeping? I have taken several degrees; but if there are as many as there are in Masonry, then I will acknowledge that I am on one of the lowest rounds of the ladder. I purchased a colony of bees with the first $4.00 I ever owned. I start for Tennessee and Alabama this week; am going to see the Sunny South.

Napanee, Ind., March 11, 1883. I. R. GOOD.

And now we get this from him to-day:—

I wish you were here with me for a little while to enjoy the scenery here. Coming up this mountain is as a Christian's journey should be — a continual going-up until the eternal city is reached. I like Tennessee, what I have seen of it, so far, and like its people. Peaches are out in bloom, and every thing looks lovely. I can see J. H. Thornburn's apiary, about 1000 feet below. I am going down to see him. I. R. GOOD.

Roper's Rock, Lookout Mt., Tenn., March 15, 1883.

That is right, old friend. You just keep on sending us notes of travel like the above, and we shall soon have you for a special correspondent; and who knows but that some day we may be able to pay you as much for it as all the bees you have lost are worth? May God be with you in all your journeyings, and may they ever be onward and upward, toward the eternal city.

"INASMUCH AS YE HAVE DONE IT UNTO THE LEAST OF ONE OF THESE, YE HAVE DONE IT UNTO ME."

MRS. HARRISON PLEADS FOR THE HOMELESS CHILDREN.

"ALTHOUGH you have started out a little in that direction." How many, many times I've revolved those words over and over again in my mind, since the receipt of the last GLEANINGS! I started over twenty years ago, and never looked back long at a time. I've no desire to parade my domestic affairs before the public, but will put in a word, since that remark in GLEANINGS, "Started a little."

We've had six protégés in our family, and half of them are in good homes, and have families of their own. I have found homes for seventeen poor children, most of them in the country, and I now have in my closet, clothing that I have repaired to dress a boy comfortably to take him with me to a home in the country next week. Last Sabbath, as I took this boy's starved, thin hand in mine, there were very queer sensations running up and down my spinal column. I am very sorry to say it, but the boys have done better, as a class, than the girls. Some of them did not remain very long, but yet they were made better by it, for it is impossible for a child who has never known what a good home is, to remain in one six months or a year, and not be benefited by it. Three boys for whom we got places in the country several years ago, and who, while here, were the terror of the neighborhood, playing truant, throwing stones at street-lamps, robbing vineyards, etc., are now well behaved when they visit the city, an are well liked where they live in the country.

Work is one of the very best reformatory measures; nothing is equal to it under the sun. If our lady bee-keepers can not obtain girls as helpers, why not try boys? In a city it is easier to obtain a home for a girl than a boy. It does not hurt a boy a particle to do housework, or lower his manliness either. The city bakers and confectioners are all men.

Peoria, Ill., March, 1883. MRS. L. HARRISON.

FROM 23 TO 50, AND 4000 LBS. HONEY.

A HEAVY TESTIMONIAL IN FAVOR OF FEEDING THROUGH A DEARTH, AND EXTRACTING THROUGH A FLOOD OF HONEY.

I HEREWITH send in my report for 1882, although rather late. I commenced the season with 23 swarms: 7 of them were mere nuclei; the rest were fair average swarms, all in Simplicity hives. I increased to 50 by artificial and natural swarming, and took 4000 lbs. of honey — 3500 extracted, and 500 comb honey, with an average of 30 or 35 lbs. to the hive, for winter stores.

The honey season began very late; cold and wet until the first of July; fed up to July 10th. At that time I do not think there was half a pound of feed in any of the hives.

Basswood bloom opened on the 12th and continued about two weeks, when there was a lull for a few days, and then came the greatest flood of honey I ever saw. This was from honey-dew and fall flowers, lasting till Sept. 12, when the season closed. So you see my crop was all stored in about sixty days. We had made preparations for taking mostly comb honey; but when the rush came we were obliged to run the extractor constantly, to give room for the queens, as the bees would fill cells with honey that had eggs and larvæ in them. I expect to hear of widespread disaster where the extractor was not used, as they have gone into winter with principally all old bees; and already the reports of losses begin to come. One man reports 6 swarms all dead — all he had; another has lost 7, and several others have lost heavily.

I have so far lost but one swarm, and that one we had extracted from late, and their stores were too much scattered in the hive. I put 12 swarms in cellar, 38 on summer stands, and covered with snow for 80 days. It has been pleasant for several days, and the bees have had a good time, and are now in good trim for the storms of spring. WM. C. HUMPHREY.

Redfield, Ia., March 3, 1883.

CYPRIAN AND HOLY-LAND BEES.

HOW THEY DO FOR ME.

IN the summer or fall of 1881 I bought of H. Alley two Cyprian queens, both tested. They bred up in the fall to good strong colonies, and for some reason or other both colonies superseded their queens and raised young queens. The young queens mated with Italian drones, there being no others in my apiary. I could not distinguish Cyps from the Italians. I looked for them to be crosser than the Italians, but was happily disappointed. I could see no difference as to their honey-gathering qualities, doing just as well as my Italians. If any difference in color, the Cyps are the yellower.

In the fall of 1881 I bought of H. B. Harrington a tested Holy-Land queen. He wrote me that she was a very fine one. In a short time she had her hive full of brood. I was fortunate enough to rear two queens the same fall from the Harrington queen, the young queens mating with Italian drones. So in the summer of 1882 I had a fair chance to test these colonies with my Italians. In the spring they bred up so fast that I concluded to rear a number of half-blood Holy-Land queens. The old stock of the Harrington queen is cross, if you undertake to handle them with smoke. I had built them up to four brood-chambers on top of each other by using fdn. as fast as the bees and queen could use it; and, wonderful to report, in a short time the four chambers were full from top to bottom. I intended to use the extractor, thinking that they could be handled with smoke, like my Italians; but the more I smoked them the more they would boil out of the top of the hive. I made out to take some two gallons of honey from them, or about 22 lbs. I then concluded that they were too cross to be run for extracted honey, and so I divided them up into four colonies, making the queenless ones raise queens, which they did.

I had no trouble with fertile workers. With care the old stock can be handled without smoke or protection, without danger of being stung. The half-bloods are no crosser than Italians, and are great honey-gatherers, as good, or better, than my best Italian colonies. In fact, they look and act like Italians. The Harrington queen's stock are more grayish, rather smaller, quicker in going out, and slow in nearing the hive. Any one can tell the Holy-Land bees from the half-bloods and Italians.

I am much pleased with the cross of the Holy-Land and Italian bees, and will establish or start an apiary of them away from my home apiary, to keep from further crossing with my Italians.

LEONIDAS CARSON.

Frederick, Ohio, March 20, 1883.

DO QUEENLESS COLONIES KILL THEIR DRONES?

ALSO AN EXCELLENT MORAL ON THE IMPORTANCE OF FEEDING THROUGH A BAD SEASON.

UNDER the above heading Mr. J. E. Pond, Jr., in your Nov. No., 1882, page 560, says: "Did you ever know a queenless colony to kill off its drones before accepting a new queen?" and describes a case of that kind that happened in his own apiary. You, friend Root, in answer say you "never noticed a case of the kind," leaving it to be inferred that such a state of things is rather unusual.

Now, my experience during the past season is similar to that of friend Pond's, and goes far to prove that queenless colonies may often kill off drones. In the spring of 1882 I had 26 colonies, and I never saw bees stronger, or in better shape, than they were in April last. The spring proved very cold, and the season consequently was backward, and my bees diminished in numbers rather than increased as they ought, and not till June did they begin to gain at all. They gained but slowly during the white-clover bloom, but did not store a single pound of surplus. The basswood season came and went without knowledge on my part, so far as any yield of honey was concerned. After basswood, comes our usual season of dearth; and my bees were left with hardly stores enough to give them a bare subsistence. Not a colony of the 26 even made preparations for swarming, except raising a few drones, and not a queen-cell was built by any of them except when the bees took it into their heads to supersede a queen, which quite a number did do without any apparent cause, the superseded queens being extra good ones, young and prolific.

The bees in the whole apiary seemed perfectly demoralized, and utterly disheartened. Killing off drones was the order of the day, and looked as though they were trying to make a pastime of it. Queenless colonies were fully as much disposed to kill their drones as any of them; and if you, friend Root, had been there at that time, I could have shown you a dozen queenless artificial swarms just made by dividing, that were as busily engaged in killing drones as those that had queens. Two colonies that had superseded their queens, and had queen-cells capped, were just as crazy as the rest, and I was compelled to feed regularly in order to stop the slaughter, and succeeded in so doing only after feeding several days, as the bees had nothing else to do (there being no nectar in the fields) to amuse themselves, they occupied their time in cutting fdn. out of frames, and holes through the quilts, and it was with great difficulty that I finally induced them to quit that (to me) very unpleasant occupation. I was expecting from day to day that they would gather enough to live on, if not more, from the fields, and so neglected feeding as I ought; but in the future I can assure you I shall not be caught so again, but shall feed right straight through a season of dearth, and thus be on the safe side.

Now, in the matter of killing drones I am sure, in my own case, the cause was the bees being completely demoralized by the honey-dearth. The past season was the poorest we have ever had here in Maine, and I hope we may never have another such.

JAMES B. MASON.

Mechanic Falls, Me., March, 1883.

Thank you, friend M. Since you mention it, I *have* seen a similar case, when a whole apiary was thus demoralized by a prolonged dearth of honey. I, too, am resolved to feed hereafter, always, when the bees can fly, and no honey is to be had. The great yields that have been reported from apiaries fed through the dearth of last season, ought to satisfy us all of the great importance of feeding when it is needed.

FOUL BROOD IN GERMANY.

ALSO SOMETHING ABOUT FOUL BROOD IN OUR OWN COUNTRY.

ONE of my German papers brings me the following, which may be of interest to you: The German Reichstag has enacted a law which is to be enforced on and from July 1, 1883, inflicting a fine of 100 marks ($25.00), or imprisonment for one month, on any one who (1) gives away or sells colonies, hives, frames, or combs, infected with foul brood; (2) who exposes knowingly, on his stand or elsewhere, infected colonies, hives, frames, or combs; (3) who does not remove out of reach of bees, or disinfect completely all such infected hives, frames, or combs, on discovery.

France, Italy, and Germany have had for years their severe trials and disappointments with foul brood. From there it spread to our country. They always had industrious and intelligent bee-keepers as well as able scientists to discover the nature of the disease, and to apply curative remedies. They differ materially with our friend Jones, who thinks the starving process a sufficient remedy.

A PROPOSED TEST EXPERIMENT.

You will please keep Prof. Cook reminded that I shall send him a colony of bees infected with foul brood as early in spring as I can get my stands strong. If I have no foul brood myself, I shall know where to get it, and infect a colony. You will remember that Prof. Cook agreed, at our Cincinnati Convention, to cure a colony of foul brood by the starving process, if he can, under directions of our friend Jones. The wager of $50.00 between brother Jones and me has a twofold benefit, as it will advance science, and be added to the Langstroth fund. We could intrust the matter to no fairer nor better hands than those of Mr. Cook.

If our German brethren are correct, it is clear that Mr. Bingham knew nothing about foul brood when he explained that only by the introduction of worker bees, and not by that of the queen, we could introduce foul brood.

CHAS. F. MUTH.

Cincinnati, O., March 19, 1883.

A COUPLE OF BEE-MEN IN TROUBLE.

DO THEY BELONG IN BLASTED HOPES?

I FIND, on looking over last GLEANINGS, that the column for Blasted Hopes looks neglected. Now, I have enough interest left in GLEANINGS to wish to see all its various departments in a flourishing condition. I never expected to be in Blasted Hopes, but here I am.

I began bee-keeping some six or seven years ago with about a quart of bees for a start. My progress was slow for some time; but when I saw the first copy of GLEANINGS I got the bee-fever, and I pushed matters pertaining to bee culture accordingly. I now have forty colonies, and have always labored to make my bees pay as I went along, in honey and not in increase of swarms. My success in wintering has been good, having never lost a swarm. But on the 2d day of March of the present year my fever burned out and left me shivering. Neighbor Thompson, a brother bee-keeper, and myself went on said day for a load of lumber for hives. The recent thaw had made the roads somewhat muddy, and we each put a team on the wagon so as to haul a good load. All went well till, on our way home, about dusk we arrived at Bureau Creek bridge, a structure 240 ft. long, in three spans. The stream was much swollen from the melting ice and snow, and resembled an angry flood, roaring and tearing under the bridge and over the banks below. As we were crossing I said to Thompson, "What a good thing it is to have a good bridge like this, for no one could cross such a stream as that without."

I had hardly said this when the middle span on which we were gave way, and we with our four horses and wagonload of lumber went crashing down into the boiling and rushing torrent below. Friend T. was thrown upon the horses, but managed to scramble back on the load, which was buoyed up by the water. I was thrown into the water, and went down, down; but by vigorous paddling I reached the top. T., who had the whip, held the lash out to me, and as I took hold of it he drew me to the lumber, and I climbed upon it. We now floated down the current, and that, too, very rapidly, crying loudly for help.

We could see our horses rolling over and over, and vainly struggling in the seething water near us. We floated down 40 or 50 rods, when friend T. struck the roots of a tree lying in midstream; but I went some ten rods further with my part of the raft, which then struck a snag, and I jumped upon it and let the raft go. The snag stuck up out of water only a few inches, and was so small that I could sit down only by putting my feet in the water. Here I sat for over two long weary hours, momentarily expecting to be swept off by some huge cake of ice or log of driftwood. My clothing was wet through and through with ice water, and I was so cold that I had to shut my jaws tight to keep my teeth from chattering.

Could you blame me for wishing that the bees were at the bottom of the Red Sea, or at the mercy of this raging torrent, which now threatened my life? We were finally rescued by courageous men in a boat, our wet clothing exchanged for dry, our chilled and stiffened limbs rubbed and warmed, and our drooping spirits gladdened by the joyous greetings of our friends. Our horses were all drowned. My team was a valuable one—my main stay in running my farm. My wagon and lumber were lost; $100 all swallowed up in a moment; more money, probably, than I ever received for honey. One of my lower limbs was injured when the bridge went down, and I have not been able to do much since. On our way home friend T. said, "What do you think of making hives now?" I told him that I wished that I had never seen one. H. O. MORRIS.

Tiskilwa, Ill., March 2, 1883.

Friend M., you are not a candidate for Blasted Hopes at all, for if there was ever a man that ought to thank God for a marvelous deliverance, with not even a bone broken, you are he. Suppose your team *is* gone, and your lumber; *you* are spared to take care of your wife and children, and have all the world before you. You have also given a timely warning to all of our readers, to beware of going over bridges in a time like that, and taking such risks. Troubles come in all occupations of life, and your bees are no more to blame for it than your poor faithful horses. Be not cast down, but reach up and let your faith grasp hold of the promises of Him whom even the winds and waves obey.

ODDS AND ENDS REGARDING CELLAR WINTERING.

DOOLITTLE'S NEW BEE-CELLAR.

IF the readers will turn to page 69, Vol. 5, they will there find a description of how I built my bee-cellar, or "mud hut," as some called it, during 1875, the time when it was built. As all the material used was wood, it became so decayed that the past fall I rebuilt it, putting up good stone walls, and lengthening it 6 feet. It was covered nearly the same as in 1875, except that I put on an outer roof to keep the three feet of dirt dry. The walls are about a foot thick, and laid up in mortar.

SUB-EARTH VENTILATION.

For ventilation I dug a ditch 100 feet long and 2½ feet deep, into which I placed two tiers of 3-inch drain-tile, one above the other, so that in case any water came into the cellar, the lower tier would answer for a drain. In the opposite end from this I placed a 5-inch tube running through the roof, having two elbows so as to entirely exclude the light. During extremely cold, windy weather, the lower, or sub-earth ventilator, has been closed partially or entirely, but the upper one has been open all the while. A high wind during extreme cold will cool the cellar too much if both ventilators are allowed to be open. In this cellar I placed half my bees from the 3d to the 20th of Nov., and after they got settled it has not varied two degrees; standing at 42 to 43° for over 3 months. Heretofore in the old cellar many bees came out of the hives and died on the cellar bottom; but the past winter there has been but very few. Three days ago I swept up all I could get, and a two-quart measure would have held them all, that being all that had accumulated during the whole winter. I often go into the cellar without a light, and stand several minutes and listen. A slight hum is all that is heard, with scarcely a bee taking wing and flying to the bottom, while in the old one the roar of the bees was much louder. At least two bees a minute would fly to the cellar bottom, and often several would be flying at once. I have swept as many as 2½ bushels of bees off the bottom of the old cellar during the winter, from 60 colonies of bees. The caps of all the hives were filled with straw before the bees were set in the cellar, and the hives piled one above the other till 3 high, leaving an alley at the back end of the cellar. I removed the caps of some the other day while sweeping, and raised the quilt. The bees scarcely stirred, but were all quiet and nice. By breathing on them they would arouse and thrust out their stings. The air inside seems to be quite moist, for large drops of water stand on the stones where not covered with mortar.

WATER FOR BEES IN WINTER.

In preparing the bees for putting in the cellar I left some of them with the enamel cloth on, by way of experiment; and upon reading W. Z. Hutchinson's account of how Mr. Robinson, of Pewamo, Mich., shoveled snow into his cellar to keep the air moist, I thought, why would not enameled cloth keep the inside of the hive in just the right condition as to moisture?

ENAMEL CLOTH FOR A COVERING WHILE IN THE CELLAR.

I knew where three of the swarms having enameled cloth over them were, and immediately went to the cellar to examine them. Upon taking off the cap I placed my hand on top; and by the warmth of the cloth I ascertained that the bees covered at least half the surface underneath the cloth, thus showing that the theory of enamel cloth being cold and damp for bees is not proven by fact. I carefully raised one side, when I found the bees located just as I had believed them to be by the warmth above the cloth. All around the cluster, but about 1¼ inches from it, were large drops of water hanging to the under side of the cloth, but I have never seen a colony more quiet nor in better condition after being in the cellar 4 months than was this. The other two were found to be in equally good condition; and if nothing unfavorable occurs during the rest of their stay in the cellar, and after setting out, I shall try it quite largely another winter.

On page 122, J. E. Frith wishes to know how many dead bees should be found on the cellar bottom. Above I have given him the two extremes. One thing I forgot to mention, which was, that in sweeping out the whole cellar not a bee flew to the light —something I never had happen before in an experience of 12 years of cellar wintering.

Borodino, N. Y., Mar. 20, '83. G. M. DOOLITTLE.

Many thanks, friend D. I like the idea of your bee-cellar so well that I feel now quite a mind to try part of our bees in something similar another year. No doubt the enameled sheets would do nicely in such a cellar, but perhaps they might not always do so well for outdoor wintering. It will be remembered that friend Boomhower has suggested the same plan for providing the bees with water in the winter. Would not your sub-earth tubes be better, if longer than 100 feet, friend D.? Would this not obviate the necessity of closing the tubes, when there are very cold high winds? The water in the lower tube would keep the air in the cellar damp enough, so that moisture in sufficient quantity would always condense on the enameled cloth, to give the bees all they would ever need without getting restless and trying to go out of the hives. We have had many reports, it will be remembered, where bees were made quiet by giving them water in the cellar.

FROM THE BOX-ELDERS.

MR. DUSTER'S OPINION OF THE CYPRIANS, AND SOME OPINIONS, ALSO, OF THINGS IN GENERAL.

WITH his chin resting upon his crossed arms, and leaning on the board fence which partly surrounds his apiary, we saw our old friend Mr. Duster a few mornings since, evidently unconscious of all things about him, meditating. We saluted him by suggesting that he was taking a rest, or was his *chin* just a little tired, or something?

"Yes, yes, young man; never you mind about the chin! but I *was* taking a rest; for I have been looking over my old journals, noting the different and varying reports of bee-men in their experience with the Cyprian bee, and the conclusions that many of them have come to. I confess it has tired me not a little, for I *don't* see how a careful man can decide so quickly as most have, as you can see by these reports, whether these bees are desirable or not. A majority of the reports the first of the season, I think, were unfavorable to them; but since the close of the working season, and parties have had more time to compare and carefully judge of results, they have been more favorable."

In resuming, Mr. Duster said, with considerable emphasis,—

"Now, I will say here what perhaps I ought to have said long ago: That in these talks I do not set myself up as some 'Sir Oracle, and when I ope my lips, let no dog bark.' I simply give you my experiences and conclusions: do with them as you see fit—that's all.

"In the three seasons," said Mr. Duster, returning to his talk on the Cyprian bee, "in which I have had them, they have impressed me rather favorably in many ways. Now, some say that they do not commence breeding in the spring as early as Italians. Of this I am not certain; but I *am* quite certain they are ready for work, as far as numbers and strength are concerned, as soon as honey appears, and that is soon enough. Instead of it being a fault, I think it one of the best recommendations, if true; for I am one of those who are not in favor of haste in early spring breeding. Ten to one you do not exhaust your queen and stores, in so doing, to no benefit, but very likely a damage. Save the stores, is my motto, and it is one of the *main* reasons why I winter my bees in a cellar; but we are getting from the subject. Almost all reports speak of the peculiar trait of the bees, of filling their hives suddenly with bees, and of keeping them so through the season. This has been my experience with them too—not a bad fault, I reckon. Many have reported this fact, for such, undoubtedly, it is; but a few claim that they give most of their efforts to this business of breeding, instead of collecting honey."

Here Mr. Duster suddenly dropped his chin on his arms again in the old position on the fence.

"Well, one needs to take a rest to draw a bead fine enough to see how such a condition of things could or can exist. They say they are a smart, active, nervous little insect, but—and here the whole thing takes the strangest kind of a turn—a sort of back action I can't understand. 'Smart, active!' That is so. But what puzzles me is to know what they're smart and active about, if it is not shown in gathering honey—the bee's normal business."

Here Mr. Duster reviewed a little, and changed the subject somewhat.

"Now, this holding back in breeding in early spring, and then rushing things as soon as steady warm weather comes; this nervous activity in all that they do, and especially in breeding up so quickly, and gathering honey so rapidly, are traits I should like to retain in my apiary."

HYBRIDS FOR HONEY-GATHERING.

"And now to change the subject somewhat, let me tell you, *sub rosa*, that when a swarm of bees does extra well in gathering honey, on examination it almost always somehow turns out to be a hybrid. At first I did not like to own it—I don't really like to now; but it has forced itself upon me against my will. Now, these are my views in crossing bees, or hybridizing, as it is generally called. This crossing has been mostly with the brown or black bees. Now, then, as it is claimed that the Cyprian and Holy-Land bees are distinct breeds, why not use them to cross on our Italians, instead of the browns and the blacks? I can not see why we may not expect as good results, yes, better, in every way, with a cross of this kind, and besides save our beautiful golden bands. I plead to the weakness of leaning to the side of beauty, especially when other things are equal. Many say that they don't care for the golden bands; it is honey they want. Yes; but why not have both? Throw aside all idea of breeding for beauty, and bee-keeping, to me, would lose half its pleasure and interest. Young man, you needn't tell me," and here Mr. Duster straightened himself up to his full height, "that you selected your young and beautiful wife *only* because she was a good worker—smart to get grub, and so on. You know that all else kicked the beam, and beauty brought the balance down by at least two-thirds majority, and 'several back counties to hear from!' You'll not deny it to me, and you dare not to your wife."

I saw that the old gentleman thought that he had me; so, to change the subject a little, I asked him how he was pleased with the cross so far.

"I am quite satisfied; for certainly they have proved good workers—kept their hives full of bees, have been moderate in swarming, lost no beauty in color, but I think have improved it, and given me the best and handsomest drones I ever saw, which, I think"—

Here I interrupted him, for I had heard from some of his visitors of his beautiful drones, and how much he delighted to show them, by asking, "How about the gentleness of your Cyprians?"

MR. DUSTER GIVES US A LITTLE "COW" TALK.

"Well, you know that they have been generally reported as cross and vicious; but mine have not been so. They have been as gentle as my Italians; perhaps I have handled them with a little more care, as I would any other creature that I saw was quick and nervous. I would use the same judgment with them as with a nervous horse or with the little Jersey cow. If one is rough and unpleasant with the Jerseys, and gives them a little of the stool occasionally, and so on, he will soon find that he has got the most vicious little brutes he ever sat down to; and, what is more, *he made them so*. Treat these active, nervous Jerseys gently and kindly, and you have in return one of the most kind and gentle of cows: treat them otherwise, and you have the most vicious.

"Perhaps you may think, from what I have said, that I judge the Cyprian to be the coming bee, or at least equal to any of the bees we now have. While I *do* think they have many good and distinct characteristics of their own, yet I judge all breeds of bees by taking the Italian as the standard; and as 'from the ocean's level all heights and all depths are measured,' so to me the pure Italian is the standard of comparison among bees. They stand among bees as short-horns among cattle, and beef among meats; as Concord among grapes: I think I'm understood.

"Talking of cross bees reminds me of a little scene which took place in my apiary last fall, all of which I saw, and a part of which I was.

"I was plagued out of all patience by a bee-bore—a regular 'crank,' and I could not get rid of him, nor stop his everlasting talk; say or do what I would, he would still hang around with that silly, sickly smile of his, which, by the way, beats Lydia E. Pinkham's by a big discount. Well, Chipperfield, as we will call him, was here one day, boring me with his useless talk and senseless clatter, when all at once he wanted to see some pure Cyprian bees — heard they were cross, and so on. I stepped to a hive that I knew was cross — would not swear they were Cyprians either. He stood at one side of the hive, when I lifted the cap with a snap, and — he saw 'em! Run, did you ask? You never saw a bottle-bellied old fellow like Chipperfield fly, I reckon. Run? didn't he, though! I doubt if he ever before had as many inducements to do his level best; it was one of the best efforts of his life. Why, you couldn't see the big patch on the seat of his pantaloons, for the shower of sole leather in his rear!"

Here Mr. Duster turned to go to his house, and I heard him say something about being *rested*.

R. H. MELLEN.

Amboy-on-Inlet, Ill., March 6, 1883.

MAKING PLAIN SHEETS FOR FOUNDATION MILLS.

IS THERE ANY THING NEW UNDER THE SUN?

I HAVE been experimenting this winter with mold for wax sheets for heavy fdn., and have come to the conclusion that I do not want to dip any more sheets for thick fdn. My first molds I made of boards, but they would warp in spite of my efforts to keep them straight, and I finally adopted thin plates of plaster, or lime and plaster; and with these I have no difficulty in molding nice even sheets.

"But, what are the advantages of the molds?" you will say.

Possibly for the large manufacturer there may be little or none; but for the bee-keeper who wants to make fdn. for home use I think there are some advantages. The greatest, perhaps, is that a small quantity of wax may be formed into sheets quickly; *all* the melted wax is used up, and no large tank or dipping-vessel is required. The sheets are of an even thickness, and the fdn. made from them is even in surface and quality. If a feather edge is desired to start through the mill, it must be provided for at the bottom of the mold. It is requisite that the mold be quite warm, and the wax about the proper temperature to dip well, in order that the sheets be even and solid.

Now, brethren, if any of you want to try this plan, go to work and make your molds of the materials named above (thin slabs of sandstone, or any porous stone would doubtless answer); put a strip of rubber around the edge of one slab on three sides; clamp the other slab to it, and pour the wax quickly in the open side. Keep the mold damp with a sponge and hot water. It should be put in warm water before beginning to use it, and allowed to absorb all it will. I have found the dipping of wax sheets to be quite a tiresome job; but I can mold them all day without fatigue, and can mold a few dozen sheets at a time when I have the leisure, without having to waste half of it in preparation.

This is all I know about molded wax sheets, and I am too busy to answer any postals on this subject.

Maysville, Ky., Mar. 15, 1883. W. C. PELHAM.

It will be remembered that we used plaster dipping-plates a great many years ago, in our earlier experiments, but they were abandoned because they so soon became soft, and broke. The idea has been suggested, of casting the sheets as we cast bullets; and I think very likely it appeared in GLEANINGS some little time ago. It was suggested, that by having molds enough the melted wax could be carried from one to another, and by this means make them even faster than by dipping. I have never heard before that it had been really put into practice, and we hereby tender thanks to friend Pelham for his invention, and the free way in which he gives it to the brethren. It seems to me it would be an advantage to have the plates hinged, that they might be quickly opened and closed. Well, after we get this done, why not have the plaster plates made with the fdn. imprint in them, and then we shall have the same apparatus now used by friends Faris and Foster, only that the wax is to be poured between the plates while closed, and set on end. This, you see, does away with all daubing and waste of wax; and if you have only 1 lb. of wax, you can make a full even pound of fdn. The only trouble I fear is, that the wax would not run into a space as thin as we should want for the base of the cells. I do not think any kind of porous stone would answer as well as the cement made of plaster and lime. We have experimented a good deal in the matter. If the plan will not make nice thin base fdn., it will certainly answer for making nice sheets for rolling. I do not think, however, it can be well worked as rapidly as the long dipping-boards we are now working, making four full sheets for L. frames at every dipping. We dip the board four times, changing ends at each time. This makes the sheets of a thickness so even that, when rolled, we can hardly see a difference in thickness in the whole sheets.

A few suggestions in regard to making these dipping-molds may not be amiss. A pair of common slates hinged together will be about what we want, if they can be procured large enough. In case the plaster should be found to cleave off from them, a few holes might be drilled through the slate. Fill one slate first, and with a straight-edge stroke it off perfectly level. When dry, oil the surface and fill the other; and when both are dry, separate them by the rubber strips on three sides, and they are ready for use. I think they might be made so accurate that the sheet when rolled would fit your frame without any trimming.

DOOLITTLE'S NEIGHBORHOOD IN ANOTHER LIGHT.

BY ANOTHER NEIGHBOR.

TO-NIGHT I received Jan. and Feb. numbers of GLEANINGS, and on page 20 I find an article from Henry Wirth. In regard to the honey crop of 1882, I think friend Wirth is mistaken, as I have kept bees since 1876, and the last season was the poorest I ever had. The year 1876 was a poor one; but I can't say how poor, as I did not know much about the business at that time.

My bees came through the winter of 1882 the best, and bred up well, and wanted to swarm on fruit-blossoms, and gathered the least surplus honey I ever had gathered per colony, and I have had as good success in getting surplus honey as the most of them from the number of stocks I have had in the spring of each year.

The season of 1881, my bees averaged me 163¾ lbs. box honey, spring count. The season of 1882 they they did not average me more than one-fourth that amount. My worst drawback has been in wintering my bees. I have wintered outdoors until this winter, and have got them in a cellar under my house, which I prepared expressly for them. I put into the cellar 38 colonies Nov. 16, in good condition, and they seem to be doing well; but I have to guess how they will come out in the spring.

Now in regard to the time basswood opened: I think friend Wirth is mistaken about its opening July 18, as it did not open at my place until July 25; and I watched it very closely; but I am about six miles from friends Doolittle and Wirth, but lower down, and a little earlier. I think friend Doolittle is not a man who wants us to believe him to be a "big man" in the ranks, even if he is a big man in flesh; and I think we can depend on what he tells us, every time, as I have always taken him for my guide, and he has not misled me yet; and as I call on him at his place I always find him ready to do for me any thing that is in his power; and in regard to keeping correct dates of bee forage, I think friend Wirth and myself a number of degrees below friend Doolittle, as he is a very careful man. A friend of mine said to me last fall, after being at his place, "Every thing was in such perfect order that the grass was not allowed to grow crooked about his place; and in regard to his strain of bees, I think we shall have to look around for some time before we can beat them; and if we had a few more Doolittles to rear our queens for us, I think our honey crops would come in more favorably."

In regard to friend Wirth's honey crop for last year, it *was* good for the year. I met friend Doolittle in August last, and he told me about Wirth's honey crop of the season, and could not account for it; but his place is about 2½ miles from friend Doolittle's, and in a hollow, and nearer the lake, and his bees must have reached some place where friend Doolittle's did not. You will always find friend Doolittle's hives that he is running for surplus honey, boiling over with bees when there is any honey to be gathered. If he has only enough to fill one hive, they will be together.

I am no practical writer for bee papers, but this I could not pass by. If they have any better bee-masters on Spafford Hills than friend Doolittle, I should like to have them "trot them out;" and for one, I should like to get acquainted with them.

Navarino, N. Y., Feb. 12, 1883. BYRON CASE.

WHO SHOULD KEEP BEES?

FRIEND HEDDON "RESUMES."

NOW, friend Root, in regard to this matter of overstocking as I left it last month. Will not a great many look on this subject as I have portrayed it? Do they not already? In fact, how many old successful honey-producers (not connected with supplies at all) are there who do not? I don't know of one.

Bro. Root, the time has gone by when I can be accused of any selfish motives in holding and penning such doctrines. First, while I am a producer on the scale of 500 colonies, and in fields clear of opposition, I am also, as you well know, a supply dealer; but though a growing one, my heart and sympathies are with justice and the producer in this matter. Justice, as I see it.

Second, I think I am now where my financial circumstances are sound enough to give me, during my remaining days, all that I have a right to demand from Nature.

Third, I should dread to think that I wanted to prevent any invalid, or otherwise partially helpless person, from taking to himself any success that might accrue from his adoption of our business; but you know I have a legitimate right to think I know something of what has to be understood and *done*, to make this pursuit a real life success; and I think I see clearly, that just ahead only those who are best adapted to it will succeed; and to urge others in, is greatly to damage them, and also those already in, who might succeed were it not for that worst of *all* opposition, *failing* opposition. Before closing, I wish to say a few words about

BEE-KEEPING FOR WOMEN.

While I do not, and never have believed this business specially adapted to the weaker sex, I am confident that there are women, some of whom I have seen, that possess both the mental and physical requirements of successful apiculture. Many are the feminine brains, but vastly fewer the muscles, adapted to it. Much more may be and should have been said and written regarding the best methods of assisting the muscles of such clear-minded and enthusiastic bee-keepers as our old acquaintance Cyula Linswik (see page 73). It gives us a lonely feeling, to think of losing these sisters from our fraternity, believing that they like and understand the business, and supposing that they are in a field not overstocked, or otherwise specially unfavorable, and that their great want is light, practical, and easily manipulated hives and fixtures, together with competent help at the right time. I feel as though these wants can be very easily supplied, and we retain the ladies while they retain the business at a good profit. I am not a large nor strong man, and should not be surprised if Mrs. Harrison, unincumbered by swaddling-clothing, would carry larger hives and more of them, in a day, than I could; and consequently I have always been working toward easily manipulated fixtures and methods. If Cyula will send her sister down to Dowagiac, we will show her fixtures and methods that we feel sure will inspire her with new enthusiasm, and Mrs. H. will make her visit pleasant, and entertain her on other subjects.

The prime object in my Student school is to yearly put into the field young men (and women too, if they apply) possessing not only theoretical but practical knowledge of the ways and means to the end of thousands of pounds of surplus honey. I am careful not to take any except such as those I believe to be honest and capable; men of native integrity and tact; and, as above stated, the main object is to have help from some of these students, a portion of which will perhaps desire for a time to work for wages, thus putting into the arena that long-felt want — competent help.

To conclude, I will say that I believe the time is coming when the honey resources of this country will be fully utilized; such is best for the country; best for honey-consumers, and will work well with the producers, provided the influx into our business constituting this great growth is properly studied and wisely managed by the present leaders of the pursuit.

There is no *need* of producers interfering with each other's interests, either in the field or in the market. Let us be educated in this very important branch of our interests, as well as to how to care for our bees.

In next issue I will reply to James B. Mason, and tell him *why* I use and prefer the case, to the broad-frame method; also state what seems to me to be clear objections to friend Walker's system of surplusage, as well as his section. I may be mistaken; but if I am, I will give him a chance to do me the great kindness of converting me to a better way.

Dowagiac, Mich., Feb. 7, 1883. JAMES HEDDON.

I heartily agree with our friend Heddon in the main, but I can not quite see that any one has as yet urged people to take up the business, who are unqualified for it. Neither can I find that very many localities have ever as yet been overstocked. Patent-hive men have, it is true, urged people to go into the business, from selfish motives; but I can not remember having seen in any of our bee journals any thing of the sort. Where people are attracted to the business, and want information, we are, of course, always glad to furnish it; but I believe we have faithfully presented both sides. As for myself, I have published the worst and most discouraging letters I have ever received, and have given them prominence, too, for the express purpose of letting every beginner know the dark side of the business. There was one point in Medina County that I have reason to think was, for a year or two, overstocked; but very soon several gave up the business, and the most energetic one of the lot (our old friend Shane) started another apiary a few miles away, and the greater part of his yearly crop, which has, you know, averaged large, has come from the branch apiary.

FRIEND DOOLITTLE'S LETTER.

TWO THIN COMBS IN ONE SECTION.

I NOTICE on page 67 these words: "Has any one ever had two nice combs of honey in one section?" Well, not exactly; but in the instance I will relate, the plan was the same as that proposed by friend Hasty. When the 2-lb. sections first became prominent before the bee-keeping world, Mr. Ranney, of Elbridge, N. Y., conceived the idea that honey could be more profitably made in the 6-lb. Langstroth box, than in sections used with separators. As the 2-lb. sections brought about 5 cents more per pound in market, he proposed cutting two grooves around the outside of the box (so as to nearly cut through) with a fine saw. After being filled they were to be shipped to market whole, and the grocer was to separate it into 2-lb. sections by simply splitting apart with his penknife.

Mr. Roberts, of Syracuse, N. Y., who bought all the honey about here for years, encouraged the idea, and placed this honey in New York and elsewhere, together with the regular 6-lb. box and the 2-lb. section. Upon asking him afterward about the matter, he told me that he could get no more for honey put up in that way than he could for the regular 6-lb. box, which resulted in Mr. Ranney's abandoning the idea, and adopting the 2-lb. section with separators.

The reason given for their non-practicability was, that when honey was plentiful, the bees would put honey in the outside cells, next the wood, and cap it over; hence if the combs were not of equal thickness (as was often the case when no separators were used), the splitting of the box apart caused the honey to leak from the ruptured cells that overlapped the groove.

WIRE SCREENS, FOR WINDOWS TO THE BEE-HOUSE.

Friend Fradenburg thinks, on page 70, that "Doolittle's bees are not very smart." Well, let's see. In 1873 I stored my honey in a small bedroom, placing the honey on shelves four feet from the floor. This bedroom was on the further side of the sitting-room, and the only means of access was through the sitting-room, which was 14 feet wide. The door to the sitting-room had a crack under it large enough to admit a bee. There were blinds on all the windows, which were kept closed to keep the rooms dark. One Sunday after the honey was all stored in this bedroom, and the honey season over, Mrs. D. and myself went to church, leaving the hired girl at home. Soon after we started she thought to go away, and in getting ready she left the sitting-room door open a few moments. As the door to the bedroom was slightly ajar, a few bees got a taste of the honey before the sitting-room door was shut. On my return I heard the shrill notes of robbing; and upon going to the house I found a stream of bees going and coming out from under the sitting-room door. Going to the back part of the house I entered through another door, and, lighting a lamp, imagine my surprise to see a stream of bees nearly 2 feet wide marching on foot to and fro across the sitting-room into the bedroom, half way across that, and then up to the shelves. Well, without going into further detail, suffice it to say that the bees "*wiggled*" into that room after that for nearly a week before I could get all the different places of access stopped, which they would hunt up. Now, friend F., were you not a little hasty in saying your bees would get into that space behind the screen, above the window, "quicker than you could say scat"? Are not you and friend Root aware that in all the instances you have given, the bees found those cracks and key-holes from the scent of the honey, and from nothing else? Bees don't know how honey looks. If you don't believe it, can some up so that none of the odor can get out, and not a bee will look at the can, whether it contains comb or liquid honey; but make a small crevice, so the odor can get out, and in time of scarcity your can will be covered with bees from morning till night. Now, apply this to your screen window. The largest volume of odor comes through the screen, and hence the bees try to get in at that place. If they chance to fly about the top, there is no odor there; hence they make no effort to get in at the top. As the native instinct of a bee teaches him to go to the light, so those inside fly to the screen. The next thing nature teaches the bees to do is to climb to the top (instead of from side to side or downward) as soon as she finds she can not go straight out. If too heavily laden to go with ease, a part of the load is given to the bees outside, which makes them try the harder to get in when the odor comes through. Upon reaching the top, away goes your bee; and as none return, the room is kept free of bees. Bees do not reason, but do only that which instinct prompts them to do. Try it, friends, and be convinced. G. M. DOOLITTLE.

Borodino, N. Y., Feb. 15, 1883.

BYRON WALKER'S COMBINED CRATE AND SHIPPING-CASE.

How to avoid Propolis on the Sections.

SEE FEB. GLEANINGS, P. 61.

IN reply to the questions which you ask me in the last number of GLEANINGS, in regard to the combined crate and shipping-case that I use, I would say, first, I do tier up these crates, and am troubled but little by having the sections soiled with propolis. As my hive has a bee-space above the frames, in making crates no space is allowed beneath their bottom slots; and, of course, in tiering up, the tops of sections in one crate are entirely covered by the bottom slats of the one above it. As where Simplicity hives are used we have to allow a space for the bees, they are at liberty to propolize the tops of sections when tiered up. We can avoid this, however, by turning the cases bottom side up when tiering, in which case the sections of the upper crate rest directly upon those of the one beneath it. As the sections are crowded close together from both ends and sides of crates, there is but little chance for gluing either the ends or sides of sections, especially where there are not projections at their tops and bottoms; in which case, when tiered, they are entirely covered with the bottom slats.

There is, however, a bee-space at part of one end of crate, and also at the sides of the outside rows of sections, the same that you object to between the edges of all the sections in the proposed new style. Right here I must say, that I can hardly see the force of your objection, considering the advantages to be gained, as I have always reckoned the particles of propolis, found where a bee-space was given, as among the smallest obstacles I have had to contend with in handling comb honey; at any rate, I can see no good reason why bee-glue is any more objectionable in this case than in the extra spaces always left by the bees where separators are used.

Second. I have used sections at the sides of brood-nests in broad frames nearly four inches wide, so as to take two widths of sections in each frame, the top of the frame being made so as to remove easily; but I have discarded this plan in favor of the one given last month, it being altogether too much trouble.

Third. I usually allow the bees to entirely finish capping the sections before removing the crates, but always tier them up when the outside sections are partially capped over, when the flow of honey and the strength of the colony will permit it. I would say, however, that where the L. frame is used, the best results will come from using crates adapted to eight-frame hives, as the bees seem reluctant to cap over the outside sections of larger crates after tiering.

Fourth. I presume it is hardly possible to space the bottom slats of crates so accurately as to make an absolute queen-excluder, and at the same time allow room for the bees to pass at all points; still, it is not very difficult to secure a practical excluder without hindering the passage of the bees. I do this by spacing the slats 3-16 or even 7-32 of an inch apart instead of 11-64. Not one queen in a hundred will pass through this space from the brood-nest to enter the sections. Perhaps the best way to space the slats accurately is to make use of a number of short blocks of thoroughly seasoned hard wood an inch or more in width, and exactly as thick as the space desired, using twice as many blocks as you desire spaces, or one at each end of each space. When the slats are in position, secure with wire nails.

It seems from page 72, that friend Mason does not agree with me as to the relative merits of broad frames and the combined crate and case; though in the light of my experience he has failed to make a single point in favor of broad frames. I have already shown that it is not necessary to separate the sections by any space in tiering (at least where only two crates are used); and though it were, this is a small matter compared with not being able to tier up at all. Again, with the crate I use I have never found it necessary to handle eight sections, much less one at a time. This may be tolerated where one has but a few colonies to handle, and can find nothing else to do; but when large apiaries are to be dealt with during a flow of honey, twenty sections are none too many to handle at once, and I often have occasion to lift forty or even sixty at a time.

Perhaps friend Mason is correct about getting partly filled sections filled out at the close of the season; but with me, at this time of year, bees often work well in a crate of such sections placed near the center of the brood-nest, when they would be apt to be lugging the honey out of them had they been placed in broad frames above; besides, contracting supers by means of division-boards, and at the same time wedging the sections close together, especially at this time of year, is a matter that works better in theory than otherwise.

The last consideration mentioned by friend Mason, that of grading our honey before shipment, which you speak of as being a strong argument in favor of broad frames, certainly deserves careful attention; but I hardly think we are warranted in adopting his conclusion. Of course, there will be crates where unfinished sections on the outside must be exchanged for others more perfect, and doubtless there are localities where the flow of nectar is at times so continuous, and varied in quality, that great pains must be taken in order to keep the different grades separate; yet where crates of not over an average size are used, holding say from 20 to 25 lbs. with open-top sections (none other should be used with such combined crates), and the locality is what may be regarded as an average one,— that is, one with an early and a late harvest, with a period of scarcity intervening,— it is not very difficult to grade your honey with tolerable correctness, without handling each particular section; an operation requiring no small amount of time and labor when both are particularly precious, and always attended by considerable loss from bruising and breaking of sections, etc., even where the most careful hands are used. I have never found it advisable to try to keep the different kinds of early honey wholly separate, nor any of the late-gathered kinds, except buckwheat, which bothers me but little, as the bees nearly always have better pasturage at that time. Where one has crates of nearly finished sections at the close of any harvest, he may readily secure their completion by means of judicious feeding, or such sections can always be disposed of to advantage in your home market, while those that are unsuitable for this purpose can either be extracted, or be used as the basis of the next harvest, as may seem most advisable.

But I had nearly forgotten that one more capable than I has been called upon to discuss these questions, and who will doubtless view this matter from quite a different standpoint; so I will bring this article to a close. In conclusion, you speak of having had quite a number of complaints from parties to whom I sent sections last year. I think I may safely conclude that the complaints were chiefly from those who were expecting dove-tailed sections from you; and having never tried the nailed ones, thought, like friend Green, that they would not like them. I am led to say this much, as I never received but the one complaint from him, and, as you have seen, he changed his opinion after a thorough trial; and as several of the half-dozen parties to whom I sent sections for you have since ordered largely from me, I take it for granted that they have repented also. BYRON WALKER.

Capac, St. Clair Co., Mich., Feb., 1883.

Thanks, friend W. I am inclined to think the points you have been discussing are of great moment to us all. Shall we take our sections singly out of wide frames and crates, and pack them in boxes to ship, or shall we give the bees a case of 20 or more, and after they have filled them, send them to market just as they come from the hive? I am strongly inclined to the latter. The case sent by friend W. is so nearly like our own, we do not give an engraving of it. Instead of hand-holes in the end-boards, he simply runs a groove the whole length. As this groove can be quickly run in before the stuff is cut up, we think it will be a quicker way, very likely. The sections were 1¾ in. thick when first received, but they have now shrunk a full sixteenth. This latter matter is one that will make trouble, if we don't look out; for if we space the bottom-bars so as to exclude the queen, the sections must stand exactly over the spaces, or bees as well will be excluded. The sample case sent, if tipped on one side, will, since the sections have shrunk, close a great many of the spaces. I think this a matter that should be well looked to, in setting cases over the hives. Turn the case over and look into the spaces, and be sure the bees can pass freely into the sections. If they have shrunk, wedge them up a little on each side, instead of crowding them up from one side only, for this will tend to keep them nearer over the spaces. I remember to have heard of a bee-man who complained that his bees would not work a bit in the boxes, when the real trouble was, they could not by any possibility get in.

If we are to omit separators, I think it is quite likely true that a 1¾-inch section is to be preferred rather than a 2-inch one; and this will enable us to make a crate holding 28 sections that will easily go inside of a Simplicity hive. As the case is to be sold with the honey, a cheap stout case will be wanted; and as the demand for them will likely run up into the thousands, we shall have to keep them crated up, just as we do sections and Simplicity hives, stacked up in the warehouse, ready to ship.

HOW A "BUSTED" BEE-MAN GOT EVEN AT LAST.

ALL IS WELL THAT ENDS WELL.

SOME three years ago one of my neighbors let me have a swarm of bees, for which I gave him $3.00. They did well, and in the fall they were heavy and full of bees. They wintered well, and in the spring were in good condition, worked well, but would not swarm; and having a wish to have two colonies, I got a neighbor, a bee-man, to divide them — he could do it "just right." Well, he divided them, and I had all I wanted. But when fall came there were not enough bees and honey to winter. I put both into one hive, and fed well. But in the spring they were weak and sickly. Then I bought three swarms; and when fall came they had done but little. One swarmed out and disappeared, and the other two I fed; but they "went up" before spring. This left only the sickly one.

But I determined not to give it up. I sent to you for two nuclei; the first one came to hand June 30, 1881 — the most beautiful queen and bees I have ever seen. I put them into a Simplicity; they did well; filled the hive half full of comb and honey, and plenty of bees. But fearing they would not winter well I took out several frames and put in their place frames containing 6 or 8 lbs. of honey; and when spring came they were in good condition — worked well and increased rapidly, and I felt encouraged to get one good colony. But, to my great surprise, on the 3d of July, 1882, they sent out the largest swarm I ever had, after putting them into a Simplicity (they looked large enough to fill the hive). Then I went back to see if any bees were left in it. But you may imagine my surprise to find the old hive still full of bees; and fearing lest they would send out another swarm, I put on a cap I got of you, with 36 boxes in it. This kept them from swarming. Both colonies did well; and when fall came I got from old hive, 18 lbs. of honey; and from seven, 12 lbs.; all together, 30 lbs.

Now, from that nucleus I got 30 lbs. honey, say 20 cts. per lb., $6.00; 2 colonies, say $10.00 each, $20.00; total, $26.00.

I put colonies at $10.00. This may be too high; but I would not take that for them, unless the constable were at my door; but as he has no business with me, $10.00 each will not buy them.

Brazil, Ind., Feb. 24, 1883. L. O. SCHULTZ.

Why, friend S., it seems to me that you are a man very easily pleased. Some of our youngest juveniles, I can imagine, will "snicker right out" to hear you tell of being tickled over only 30 lbs. of honey. Nowadays we expect to hear of 300 certainly, from the old stock and the swarm. Never mind; go on and be happy.

FRIEND TAYLOR'S STORY.

BEES IN NORTH CAROLINA, ETC.

THE bees in this locality have wintered quite well, as usual, and are now busily engaged gathering pollen from various sources, the soft-maples principally. Our winter has been about an average one, and we consider cold weather over for the season.

QUEENS BEING LOST ON THEIR BRIDAL TRIP.

Is it possible that the future may bring enemies to bees, so that, in certain locations, queen bees can not be reared?

During the last season, I found it almost impossible to get young queens fertilized; at least, when they went out on a bridal tour they *never* returned. In a batch of 36 fine young queens, only *two* returned. The young queens would appear extra strong and lively, and go out promptly; but I think some enemy would gather them in. This was the condition of things the whole season; and though nucleus hives were widely separated and distinctly marked, an average of 85 per cent was a total loss. Nor was it confined to nucleus hives alone. In strong colonies that had swarmed, the young queens, eight times out of ten, would be missed about the time one would expect her to be laying. On this account a great number of strong colonies in box hives dwindled, and were soon in the clutches of the worms. The owners would say, "Well, this is a bad year for bees; the worms are coming around mighty thick, and ruined nearly all my bees; the worms are an awful pest to bee culture here at times."

QUEEN-REARING A FAILURE.

If the same fate followed young queens every year that has been our experience during the last, dollar queens could *not* be reared for less than $5.00; and even then a man would lose money on them, supposing no customer reported, "Queen to hand, dead as a door-nail; please send me another, *quick*."

ANOTHER HONEY-PLANT — "GALLBERRY."

All our surplus that is worth mentioning is procured from a shrub locally called "gallberry." The botanical name I have not yet discovered. These shrubs grow all through our country spontaneously, and are from 3 to 8 feet high. The blooms are followed by a dark-blue berry which, when ripe, is fearfully bitter — worse than quinine. The robin (redbreast) is extremely fond of these berries; and though we wonder at his taste, we find that, quite soon after their migration here, and through the use of this food, they become very fat and edible themselves. When in full bloom, a bunch of the flowers shaken over a newspaper covers it like dew with the "uncured" honey, which tastes any thing but bitter. This honey is just perfectly splendid; and when I send you a sample the first of June next, at which time it is in all its glory, you will see that it is a number-one quality of pretty light good honey.

BEES WON'T STING SOME PEOPLE (?).

A few days ago, a country man came into our town with a few pounds of "strained honey" for sale, and soon got into an animated conversation with "some of the boys" on the subject of bees and honey. He told them that there were a few "lucky-born" people who could handle, or do any thing with bees, and that the bees, knowing they "had found their master, would submit to any indignity, and not *dare* to sting." He also told them that he was one of those fortunate "few," and he just expatiated upon the subject till an old colored man told him, "Go 'way from here, boss, you's just talking." Finally, to show the "boys" that he could back up his word, he followed them out to my apiary (I now have 12 colonies of bees). They soon explained the matter to me, and our bee-man asked my permission to "try his hand," and show the boys what a "bee-king" *could* do. I referred him to a colony of hybrids out in one corner of the garden, and, without any smoker, he "broached them." I stood off at a respectful distance, knowing that it took two smokers to assist a man in getting into that colony. The "bee-man" opened the hive, gently pulled off the enameled cloth, and in a second I saw at least six dozen hop ever so gently up toward his face (he had on no veil). I saw him "gently" wipe off at least 30 bees from his face, and just then I saw them all over him. He dropped the top, bounded over the fence, ran into me, and took a bee-line for the Cape Fear River (he lives on the other side, somewhere); lost his hat, shelled off his coat and dropped that, and stood not on the order of his departure, but "departed." He did not call for his tin bucket or hat and coat for over a week, and then came in during the night. I think he is *cured* of handling "everybody's bees." What do you think of it?

Later.— He says the "*moon*" was not "exactly *right*," and that was the cause of the bees "getting after him so." R. C. TAYLOR.

Wilmington, N. C., Feb. 28, 1883.

There may be some enemy that takes off the queens, friend T., although I can hardly understand how they should be able to single them out from among the working bees; and if you have a bird or reptile that is taking working bees also at that rate, it is surely a serious matter indeed. We have at times had a great many queens lost, and, again, hardly one in a hundred fails to return. With our present large apiary, I think we have had less such losses on an average than when we had only a few hives. —Please send me a sample of that gallberry plant, with the blossoms, and we will have it named.

HIVING SWARMS WITH CLIPPED QUEENS.

A SUGGESTION OF VALUE.

YOUR instructions in A B C recommend the moving-off of parent hive and hive-swarm on old stand, and I often see the same advice given in many of the leading bee journals of the day. I followed this plan until two years ago, when I concluded to attempt the hiving in front of old stock, and avoid the hard lifting and disarranging of things generally that had taken me some time to level up and fix to my notion. I accordingly made a platform about two feet square, and about the height of entrance; left off one end, so as to set well up to the parent hive and over alighting-board. Then took an old box hive and nailed three cleats on the bottom, leaving one side open for bees to enter freely. These and a piece of burlap 1½ yards square I placed close at hand; when my next swarm came out I caged the queen, placed the platform in front, and swarming-box on top, nearly up to the parent hive; I then placed the queen in front, and waited their return. As soon as I saw any indication of their returning I closed the entrance and front of parent hive with burlap. This cut off their entering the parent hive, and they at once took to the box. As soon as they began to enter nicely I released the queen, and all was well. In from three to five minutes I carried them to or near where they were to remain, and fixed their future home at my leisure. This being done, I set them off and turned the platform up to the entrance, and shook them in front; the bees were hived, and the old hive unmolested.

I have practiced this for two years, with success every time, and a boy or girl 12 years old can hive a swarm in this with ease.

BEES ALL RIGHT.

My 20 stocks, packed on summer stands, were out in full force March 2d. Temperature was 48° in shade, and 68 in the sun. I opened most of them, and found them in tiptop condition, plenty of honey, and bright as gold dollars, and brood in nearly all of them. In one stock, standing at the south end of a large building, and in a warm location, I found 3 frames about ⅓ full of brood in all stages, and they had commenced the fourth. The bees cover 6 American frames nicely. Would you consider this early brood detrimental? This is my fifth winter with frame hives, and I have yet to lose my first colony. In the winter of 1880-'81, I lost 6 in box hives, all I had.

SWARMING OUT IN FEBRUARY.

A neighbor of mine informs me, Feb. 17th, he had a stock swarm out *clean*, and go in with another stock. It was a last-year's swarm, and left 30 or 40 lbs. of honey, all clean and nice; what was the cause?

C. L. BOSTWICK.

Sandy Hook, Conn., March 5, 1883.

Many thanks, friend B. I have no doubt but that your plan will work nicely. Now for the ladies, if not for many of our sex also, we want all these appurtenances light, so you can catch them up and run, if need be. Well, make the platform of thin basswood, securely nailed or screwed together, and then use a basket instead of a hive. If the bees are sometimes allowed to stay in it long enough to have a few combs built in top, all the better. Now, who can give us a strong willow-basket, in the shape of an old-fashioned straw bee-hive, just to be used for hiving swarms? You see, they would never smother in it, no matter how hot the day was, and they could also very easily cling to them.—Who can make them, and how much per hundred? I hardly think the large amount of brood will do harm, if you have bees enough to cover it well.—I could not tell why the bees swarmed out, without seeing the hive. If they stood very close to another colony, I should suppose they might have been queenless, and simply walked or flew over to the hive that had a queen.

SEPARATORS OR NO SEPARATORS.

FRIEND HILTON'S "TESTIMONY."

I FIND on page 587, 1882, "What Friend Hasty thinks; doing without Separators." My experience being so different from his, I can hardly refrain from giving it. I ran 17 colonies the past season for comb honey, and what increase they gave by natural swarming. I use a combined honey and shipping crate on the second story of my chaff hives. The second story being single-walled, I can place 3 of these crates on each colony, holding nine 5 x 6 sections and no separators. I can use one, two, or three crates, as the colony may require (I will send you a photograph of the hive and fixtures as soon as I can get some taken). I used full-sized sheets of fdn. in my sections, and the result is, that the 17 have increased to 41, and I have taken 1435 lbs. of honey, mostly in 5 x 6 sections, using no separators except a few on some broad frames in brood-chamber, and I have not had a dozen sections but that I could crate, and my 5 x 6 sections were filled a great deal better than the 4¼ x 4¼ which I had in the brood-chamber, as every one testifies who saw the honey.

Now about the sales: It is nearly all gone in our little home market, at 20 cts. net. I commenced putting it on the market in July, and it has been a staple article here. Now I am fully satisfied I could not have obtained this amount with separators, or got my honey in as good shape. My honey did not come in five pounds a day either; but when the bees took possession of one of those crates they just filled them full and drew out the fdn. in all the sections at once; where if I had used separators they would not have done so. I go through my apiary once a week, and take out all that are finished, dropping in a section with a full sheet of fdn. between two others if I can; but I never take off the crates unless I want to examine the brood-apartment.

Toward the close of the season I take the unfinished sections in the third crate and put them in the other two, and end the season with one crate of nine sections on each hive, just as I commence in the spring; so you see I have but comparatively few unfinished sections. I extracted 78 lbs. from my unfinished sections, making 1513 lbs. from my 17 colonies, spring count, or 89 lbs. per colony.

GEORGE E. HILTON.

Fremont Center, Mich., Dec. 4, 1882.

SILVERHULL BUCKWHEAT.

FRIEND PERRY'S EXPERIENCE WITH IT.

FOR about seven years, bee-keeping has been a fine specialty with me. During that time we have not had a season but that bees in my locality have gathered honey enough to keep up brood-rearing from the middle of April to the first of September, and sometimes much later, there being a constant succession of honey-flowers from elm, early in the spring, to goldenrod, late in the fall; but our best honey-plants, and from which we derive our principal surplus, are white clover, basswood, and buckwheat. The supply from all other sources is always quite slow. White clover and basswood flourish in abundance here; but for buckwheat I have to depend chiefly on what I sow, as there is but little raised by the farmers around me. I have raised more or less of the old kind of buckwheat every year; but this is the first season that I have had seed and opportunity to give the "silverhull" a fair trial. I make it a point to sow buckwheat so that it will come into blossom just as basswood closes, and I consider it useless to sow earlier, either for seed or honey.

Last year the season was very late. The 6th of July I sowed five acres. The soil was properly a sandy loam. I put on ½ bushel to the acre. Basswood honey closed the last of July. About a week later, honey began to come in from the buckwheat; but with something over 100 swarms to work on the five acres, the surplus could not be expected to be very great; yet they filled up their combs, finished off quite a good many sections, and I extracted some. The honey is not nearly so dark as from the old kind, neither does it have that disagreeable odor. I cut the buckwheat, and when it was dry I drew it into the barn, as no machine was nigh, and thrashed it this winter with the flail. When I got it partly thrashed I estimated the crop at 80 bushels; but when it was done and measured I had 110. From 16 bushels which I had ground up I got 103 lbs. of middlings, 103 lbs. bran, and 365 lbs. of the nicest buckwheat flour I ever saw, being very nearly 23 lbs. of flour to the bushel of 48 lbs. S. C. PERRY.

Portland, Ionia Co., Mich., Jan. 25, 1883.

Perhaps we might say, that about 60 bushels of the above crop is now in our granary, waiting for orders, and we are going to try and not get cornered on buckwheat in the way we have been on alsike this season. I am very glad indeed to get so good a report from the silverhull. The amount of honey indicated is far above what I would have estimated.

HALF-POUND SECTIONS, AGAIN.

WILL THE BEES WORK IN THEM?

I SUPPOSE you are almost tired of this; but now that the subject is being discussed, I have taken the liberty to send you a sample of some sections that I used last season — as an experiment — and also to write a little about them. They are simply the prize section divided into four equal parts, with fdn. starter in each part. I first thought of this style of section when desiring to have a card of honey that could easily be used by a small family at one meal, and not have to be set away, until "next time," to run all over plates, etc.

I was afraid at first that the bees would not work well in them. But my doubts were soon dispelled when I had half a dozen all filled with white-clover honey, and nicely capped. Everybody who saw them exclaimed, "What handsome honey! where did you get it?" etc. I found it to be the neatest and handiest honey for table use that I had ever raised; and the coming season I intend using about half of this kind of section, and half of prize sections. If any of the readers of GLEANINGS have tried any thing similar, I should be glad to hear how they succeeded. CHAS. H. SMITH.

Pittsfield, Mass., March, 1883.

Thanks, friend S. Your experiment seems to decide that bees will work well in a section as small as 2⅜x2¾x1¾ at least. It may make a difference, having them separated by only one thin partition, instead of two; but I think not very much. Your experiment, friend Smith, suggests also another thing: It is quite a task to handle so many small packages; and in merchandise, we see every day that they avoid this by first making packages of a dozen, and then having the dozens also packed in packages of one dozen each. Well, now, if we could have the bees fill these small sections in a little frame of four, eight, or twelve, and handle them only by the frame until they get to the retailer, we should have got ahead quite a little; but perhaps it would be better still to adopt friend Walker's plan, and handle them only by the case of 16, 24, or 28.

"DAN WHITE."

HIS EXPERIENCE WITH CHAFF HIVES.

SEEING I have given my 120 colonies a good looking-through after their long confinement, I will report how I found them. One hundred colonies in chaff hives in my home apiary are in as fine condition as I ever saw bees at this season of the year. One drone-laying queen is the only thing wrong with the entire lot. I was very thorough last fall when I put them in shape for the winter, using division-boards in every colony, tucking them up according to the size of the cluster, and in every instance I gave them as close quarters as possible; 10 colonies were on four frames, and the remaining 90 were on from 5 to 7 frames.

Bees is this section stored considerable honey-dew, or black honey, and I took this as well as most of the old combs containing bee-bread, or pollen, from them, not leaving more than one comb containing pollen, in each colony. All the rest of the combs were well filled, and sealed with the best clover and linden honey. Every colony handled as above is in a healthy condition, and I believe would not have suffered for a fly for four weeks longer.

I experimented with 6 colonies, taking pains to leave some late black honey, and combs with pollen; and these are the only ones out of the hundred, that daubed entrances. They were very strong colonies, and will go through; but had I experimented with my weaker colonies I could have reported a loss of a share of them at least.

I hear of heavy losses of bees all around me. One man will save only four or five out of 30, and several others report their bees all dead and dying with cholera. I have taken pains to ascertain from each one of them if they put them in good shape for the winter; and in every instance they say they neglected them. Now, my own report of 22 colonies, 2½ miles from home, 20 in chaff hives and 2 in Simplicity hives, which were neglected last fall. But few were tucked up with division-boards, late stores were not taken away, and consequently I can report a loss of 6 colonies already, and several more will need careful nursing to get them through all right. The two in Simplicity hives were tucked up with a division-board on each side of cluster. I took pains with them, because they were in single-walled hives; put a story on each, to hold chaff cushions; but for all this they are both dead. I believe that, in most instances where losses are reported in chaff hives, they have been neglected. Guesswork with bees will not winter them successfully in any hive; but if put in the best possible shape in chaff hives, on their summer stands, they will winter, no matter how long or severe the weather is; at least, I believe so.

New London, O., March, 1883. DAN WHITE.

THE RESULTS OF ONE WOMAN'S BEE-KEEPING.

FIFTEEN 2-HORSE WAGON-LOADS OF COMB HONEY.

(Continued from last month.)

OUR experience has been, that it is very difficult to get sections all filled in the sides of brood-frames in the body of hive in poor seasons, and as our hive is a large one (Quinby Improved), we had a good many sections partly built, left from last year, and some from year before. This year every thing was filled, from the bottom of the hive to the top; and as the colonies were so strong, and so much honey coming in that about half of the colonies received a second story, in which the rack on the hive was raised up when half or two-thirds full, and an empty rack set on below; sometimes both racks would be finished at once and all below, making about 100 lbs. all taken off at once. Then we put in a division-board below, and tried to shut off the bees from the side room below, generally setting in large brood-frames, covering over with tin separators to keep out the bees. Then we set an empty rack on top, 40 lbs. capacity, and used the ring, or two-story, for top boxes on other hives that needed top boxes. Very often by the time we could get around to the first hive we would find that the bees had found a way into the covered brood-frames below, and had them full, or half full, of nice new honey, and the rack full also. In some cases we needed to tier them up again. Some hives in the latter part of the season were so full of bees it seemed they could not do without the second story.

HONEY STORED ON THE OUTSIDE OF THE HIVES.

We had four cases of building under the hives. Before we would find them the nice white comb would be seen sticking out by the side of the hive; but that was, in each case, because the bees had swarmed, and a clipped queen had run under the hive, and the bees had gone under there instead of returning into the hive. The bees in the hive had raised another queen before we found them, in two cases; and as the other two were queenless, possibly a truant swarm had found a home under one or two of the hives.

MRS. AXTELL'S "HELP."

Mr. Axtell and myself had our hands so full we could not possibly keep up with the bees, especially about six weeks in the fall. During the June and July harvest they had filled all the sections we had prepared for the whole season. As soon as Mr. Axtell could leave the Timber Apiary, 4½ miles away, he was obliged to oversee his harvest and haying, and start his horse-power saw, and make a new supply of sections, so I was obliged to take my carriage, with a small boy part of the time, and the rest with one of my Swede girls (she could speak but few words of English), as bees were swarming every day, and honey needed to be taken off, 400 to 500 lbs. per day. Another precious little Swede girl at home, 16 years old, had the care of the bees. She sat out under the maples, and nailed sections; when a swarm would come out she ran and caught the queen in a cage, and laid it on the entrance-board, stopped up the hive, and set a nail-keg (bored full of holes) over the queen; one side of keg raised a little; then ran and touched Mr. Axtell, and told him a swarm needed care, if he was sawing, as he could not hear the bell ring. The girl in the house generally called Mr. A., instead of Bettie, our bee-girl; sometimes he would be in the hayfield, and two or three swarms would be out before word came to him; but that, I think, was the way the bees got under the hives, as sometimes she did not find the queen, and she said the bees went back. These girls did not come to live with us until July, and never had worked with bees before. Considering their inexperience in bee-work, they did exceedingly well. Bettie learned to make sections well, and as *rapidly* as almost any man. The girl in the house also would nail sections when through work (we prefer nailed sections to dovetailed).

It was a chase for awhile to keep up with the bees. Three times we thought we had given all the room, and more than they could possibly fill; but on going again to their hives we would often find every section full, and sometimes every one sealed. When we came to a hive toward the close of the harvest, that seemed to need no more room, for fear of their not having room before getting around to them, and we thought not best to raise the rack for fear they would not seal it over before the close of harvest, we set a rack on top, then the top box, or a "ring," as we call the rough wooden tiering-up boxes. Often when we again came to the hive we found the top rack half full of honey, and the lower one finished. We ran out of racks to hold the sections at one time, for the second story, so we set on the second story and filled it up with sections, which did not work so well, as the sections would generally get more or less out of shape; but the bees would fill them with honey all the same. We had help, but we could not trust them to put in the sections without working with them, as it is, we think, very particular work to have them put in just right, so the bees will not build the combs bulged when not using separators. We like to keep the full unsealed sections all together, then next to them a section ¾ full; next, one ½ full, then ¼. Even if sections are *full* of foundation, if placed next to a full comb *unsealed* they will often lengthen out the cells to the full comb, and then build a thin one of the foundation. If we can not grade them down, we like to put the empty section next to a sealed comb, or sealed on one side, or very nearly so. When honey is coming in fast, and the sections left in the hive are in about the condition the bees would build them, they are generally straight and true; but we think it pays to go over the apiary often, and cut out the little flanges that some colonies seem to insist on building.

Through the girls not knowing any better, and our haste, we got several racks on without starters; and as there were no separators in them, the bees, some colonies, built long combs straight through from one section to another, instead of following the section-bar. Of course, such racks were removed from the hive. We ran out of white combs and foundation, and as soon as we found the bees had gone below into the brood-frames we had tried to fasten them out of, we got all the nice comb we needed *there*, by leaning them next to the entrance at night, and bees would remove all the honey by morning.

15 TWO-HORSE WAGON LOADS OF HONEY.

The 30,000 lbs. sent to Chicago made just 15 two-horse wagon-loads. The wagons with top boxes on were all full but the last load. You may be sure my heart went out with those crates of honey, inwardly praying that God would bless them and take care of them, and that every crate might be the means of saving a soul. Already over $300 of the first fruits of the sale have gone on its mission of mercy — treasures laid up in heaven, where moth and rust can not corrupt, nor thieves break through nor steal.

BEE-KEEPING FOR FEEBLE WOMEN.

When I began working with bees in the spring I could be on my feet but 2 or 3 hours each day; consequently, Mr. Axtell had the greater part of the bee-work to do; but each day I would go out a while in the forenoon, and then again in afternoon, saving all the strength possible for that work. Before the middle of the season I could be on my feet longer, and accomplish more, than he, as many a day I worked more than 12 hours on my feet, with good appetite and good digestion too. I don't know whether it was the bee-stings, the outdoor air, or the love of the work, or altogether, that have done more for me than thousands of dollars spent in doctor bills.

When taking off full racks (40 lbs. of honey) I could not lift them, neither could my girls; but both together, we could, by careful lifting, set it on the little express hand-wagon, and haul it to the honey-house. The honey was brought home from the other apiary in better condition, and also with less work, by leaving them in the same racks they were built in. But when taking out only a few sections from each hive we would place them on end on a division-board, and my girl would carry them to the house and fill up rack; or when I would find a great many racks full, and I thought one of our hands could go over with us the next day, I would mark such hives. When the hand went over he would always bring back a carriage-load of honey — 600 or 700 lbs. He would carry and pack the honey, my girl would carry the smoker, and I took off honey and put most of the sections back in.

CHILDREN AS HELPERS.

When closing the harvest I found it paid well for four of us to work together; or any other time, when not needed to watch swarms, one to carry honey, one to smoke, one to take off, and one to put back sections. Bettie got so she was valuable help, and I could nearly trust her alone to take off and put in sections, by having a little oversight. Hannah could smoke the bees; and as she could not speak one word of English when she came, in August, from Sweden (and Bettie came a few months before, and Charley only a year before), they were longer in learning; but Swedes make the best of help when once taught — at least, ours do. They are faithful, kind, and perfectly honest; but it is a great task to teach them, both how to talk and how to work, at the same time — especially girls; but we love them, because they are good.

Mr. Axtell has just bought a new two-horse tread-power that he is to-day fitting up — he and a carpenter, so as to run his Barnes' saw and other circular saws, as his old one-horse power did not give force enough to suit him. Then we want to have our sections all in racks, and with starters in, ready to set on hives when needed. My girls can nail the sections this winter, and they love to make them.

WET CLOTHS, TO STOP ROBBING.

When taking off the last honey, and fitting up for winter, four or five of us would all work with one hive, and the work would be done so fast that bees could not injure each other by robbing, as we would commence so early in the morning that we would get through a dozen or twenty hives before they began to fly; and as soon as a hive was finished, if a wet cloth as large as a large towel is laid all dripping wet close up to the entrance, so close that a bee can not get out or in, it will stop robbing, and is not so much trouble as to hang a cloth over the front so as to prevent bees getting out or in. The bees in the hive will always push their way out, but the robbers will be driven away by the wet. We discarded the tent two or three years ago, as it was too slow work. We seldom have a case of robbing now, and wet cloths have always stopped it.

My girl and myself would take down second swarms from trees, by waiting until a part had clustered; then hold under the cluster a peach-basket suspended on a pole; then with another pole, but lighter (a bamboo fishing-pole with a hook on the top), shake the limb, causing the bees to drop into the basket. The basket ought not to wave or swing around. We liked the basket better than the swarming-boxes, as given in GLEANINGS. The boxes are too heavy. The idea of the basket on the pole, I think, we also saw in GLEANINGS after we had tried it.

AN IDEA IN GETTING SWARMS BACK.

I have this year brought back nearly half of my second swarms, and those with unclipped laying queens (weak colonies are more apt to come back), by simply opening the hive just as the last of the bees are coming out, and taking the remaining bees, and shaking in front of the hive. If they have not already begun to cluster they will often come back. As it is always necessary to go through such hives and cut out queen-cells and give eggs and larvæ to hives with unfertile queens, there is no time lost in doing so. I have often had such swarms try to get into other hives which I happened to have open when they were swarming. The roar of the bees in open hives seems to call them back. Mr. Axtell says he never has much success in bringing them back in that way. I always try that method when entirely alone, as I am not always strong enough to hold up the pole, and shake the bees at the same time. It requires strength to do both rightly. If I am sure the issuing swarm has an unfertile queen, as she is generally first out, I have often stopped the swarm in this way also, when caring for bees alone, and no help is near. I close the entrance when about one-fourth of the bees have come out; sometimes this will stop them, as the few bees that are out with the queen seem to think there is not enough of them to make a respectable swarm, and the bees in the hive will give up trying to swarm. Possibly a queen might once in a great while be lost in that way; but when one is alone it is best to choose between the two evils of losing either the queen, or both the queen with the swarm, as our Timber Apiary is in an apple orchard of very large and tall trees.

HYBRIDS EQUAL TO ITALIANS.

Our hybrid colonies this year gave us just as much honey per colony as our Italian bees. The greatest amount given by any one hive that we kept a record of was 300 lbs. comb honey and about 4 combs of brood. They swarmed late, but we took away most of their brood, and gave back the swarm. It was a hybrid colony.

FROM FOUR TO SIX, AND 400 LBS. OF HONEY.

Our pastor's boy, 12 years old, Willie Gruld, who was with us in May and June, had two colonies which we had given him on his work the year before. They gave him 400 lbs. of honey, and increased to 6 colonies. Whether all are strong and in good condition for winter, I do not know. The 7th swarm he sold on a tree. Mr. Axtell swarmed the first for him. The first time after that he took all the care of them.

VENTILATION IN CELLARS.

We have about 15 colonies of bees in our cellar, and the rest out of doors. As the bees are so strong in numbers in the cellar, and so many of them together, we have to keep the three windows and door open the greater part of the time, both night and day, only shading the door and window so that the direct rays of light will not make the bee-room too light. We are glad to keep them open, as, when closed for a few days, the confined air smells so impure, and cellar air will most certainly find its way more or less into the rooms above, which, if impure, will certainly carry with it disease and death.

MRS. S. J. AXTELL.

Roseville, Warren Co., Ill., Jan. 15, 1883.

(Concluded next month.)

DO BEES HEAR?

FRIEND SHUCK'S EXPERIMENTS.

CONSIDERABLE has been said, of late, in the bee papers, on the above question; and friend Hasty's translation from Virgil, and his comments on the same, have prompted me to write a few lines for JUVENILE GLEANINGS on this "something of first-class scientific interest." Friend Hasty says: "Some of the children will be surprised to hear that bees are accused of being deaf." I, too, am surprised that such persons as Sir John Lubbock, after playing the violin so closely to his bees, and not being able to induce them to waltz, beat time, or try the key of "one sharp" on him, should fail to discover the effect of the music on them.

If bees do not hear, why should they make so many different sounds with their wings? Turn up the cloth from over a colony of bees, and you will hear several of the little fellows zeep, zeep, zeep. Now give them a little puff of smoke, and notice what a different tone, as they beat a retreat down the combs. If they can not hear, why do they hum so loudly when shaken from a limb, box, or basket, in front of a new home? Why do the workers try to catch a young queen, on returning from a flight, before she alights? but as soon as she alights, they treat her kindly. Why do they serve the drones that appear first in the spring in the same way?

But this is not proving that they do hear. I have tried several experiments to prove or disprove that they do hear. I have tried "whacking" stones and shingles together near the hive in cool weather when the bees were all quiet; and in warm weather I have taken the combs from the hives, and tried whistling, singing, and blowing a large sea-shell. The effects are evident; and I repeat the assertion, that I am surprised that any one should think that bees do *not* hear.

In cold weather, if you strike two stones, shingles, or any thiing that will make a noise, together near the hive, the bees will make a buzzing noise similar to that when you tap the hives with the fingers or a stick. But in singing, whistling, or blowing a horn, the effect is singular. Short, quick, or moderate tones do not appear to be noticed; but loud, prolonged tones, high or low, as sharp shrill whistling of the lips, singing, or blowing of a horn, have the same effect.

Now, I should like to have our little bee-folks to make the experiments for themselves, and report, so we can have the testimony of at least two or three, to prove that bees do hear.

If you have an observatory-hive, you can make the experiment without opening the hive. Wait until the weather has become warm, and the bees are very busy. Then take a horn, or something you can make a pretty loud noise with; hold it close to the glass, and just see what a nice rest they will take while you blow; and as soon as the noise ceases they all proceed to business, just as though no one were near. If the noise is quite loud and steady, and the bees are not disturbed, they will all become perfectly still, just as if they were taking a little "nap."

S. A. SHUCK.

Bryant, Ill., March, 1883.

Thank you, friend S.; but as the JUVENILE is more than crowded, I have thought best to put you among the old folks. Those who argue that bees do not hear, would say that it was the vibrations, caused by the sounds you made, that jarred them, and thus produced the phenomena you mention. Then arises the question, What is vibration but sound, or *vice versa?* I wanted to hear you give one case you almost touched — the "zeep" of a queen. Bees will hear this, when it comes from a young queen just being introduced, and will hurry over to where she is, even when they are on a comb, separated from the rest, and held in the hand. I think bees do hear.

HONEY FROM CORN, AGAIN.

A MISSING LINK IN THE CHAIN, AND NOT A DESIRABLE ONE EITHER.

I DESIRE to call your attention, as also the attention of all bee-keepers in the West, to the growing importance of the *corn aphis*. This insect has been known to entomologists for about fifty years, and described by Dr. Fitch, of New York, as *aphis maidis*. It is now becoming a dreaded enemy to the corn interest of the country. The following items are from Mr. Boardman: "About the latter part of July the mature aphides will be found, often in great numbers, together on the tassels of the corn. They are about one-twentieth of an inch in length, of a pale green color, except the front part of the head, which is dark. On the upper and hinder part of the abdomen are situated two small black horny tubes, which stand up like two little horns. From these tubes is secreted a sweet, *honey-like fluid*, of which the ants are very fond; and the presence of the aphides may be easily detected by the numbers of ants always in attendance upon them. You will find a part of the aphides are winged; these are the males. They are marked very much like the wingless females, except that their thorax is black, and their abdomen is a greenish yellow. They have four wings, which are held erect in repose. After pairing, the male dies, and the female lays her eggs, which in a few days hatch, and the larvæ very nearly resemble the parent, only smaller; and, strange to say, this brood is all females, and, by a strange provision of nature, are capable of producing other individuals without the intervention of the male; and instead of depositing eggs they are viviparous, bringing forth living young. And these are like the former brood, all females, who in their turn produce others through five or six generations, until the last brood, which again presents a remarkable variation, as it consists of males and females, which, after pairing, deposit eggs which remain over winter to again pass through the same round another year. * * * * * The eggs of the last brood are deposited in the ground; and soon after planting in the spring, about the middle of May, they begin to come out, and the larvæ collect on the roots of the young corn. Their mouth consists of a hollow tube which extends backward between their fore legs two-thirds of the length of their body. This they thrust into the young root, and through it suck up the sap. If you walk over a field infested with them, you will soon notice that some hills of corn begin to assume an unhealthy look; and on looking a little closer, will observe numbers of the small red ants running about the hill. Now carefully dig up that hill, and you will find the roots loaded with thousands of the little green aphides, all busily at work pumping the sap out of the roots," * * * to be converted into Prof. Cook's "louse nectar."

Now, do we not get a little more light here on the "corn-honey" investigation? You may possibly remember that I once offered fifty dollars for a pound of corn honey gathered from the male flowers in the tassel. I believed that the silk was the proper place to look for honey. Mr. Gallup replied that he had a large quantity one season, gathered from the silk. Others replied, that on the leaves and at the gland at the base of the leaf their bees had been tonguing the corn. You are all right, boys; your bees were after Prof. Cook's corn-lice nectar, and no mistake about it. No, not certain. Novice says we must not be too sure of any thing. Never brag that we stand, lest away "go our heels." JESSE OREN.

La Porte City, Ia., Jan. 31, 1883.

PREMIUMS AT OUR STATE FAIRS, FOR THE ENCOURAGEMENT OF BEE CULTURE.

WHAT THE TRI-STATE FAIR ASSOCIATION HAS DONE.

I'VE just been throwing up my old hat, and giving "three cheers and a tiger" (in my mind) for the officers of the Tri-State (Ohio, Michigan, and Indiana) Fair Association. Why? Because they have just adopted the following premium list for the "Bee and Honey Department" for the next Tri-State Fair, to be held at Toledo, O., commencing on the 10th of next Sept., and continuing one week. Last year our premium list amounted to $100, and this year it has been increased to $208. The officers of the Fair Association were so pleased with the bee and honey display last year that they have said *yes* to all our requests; allowing all exhibitors the privilege of selling any thing belonging to our specialty, in any quantity. We expect to have one or more tents on the grounds, where such bee keepers as wish can "camp out;" and if they bring food ready cooked, to last them during their stay, they can be independent and "at home" for a very small outlay of money.

I felt very much like congratulating Prof. Cook and his co-workers over their success in getting such a good premium list adopted by the Mich. State Ag'l Soc., and I'm sure they won't be a bit jealous because our list offers a larger amount of premiums, for we could not help it; and you know we are not responsible for what we can't help.

A new feature that we have introduced is the offering of a premium for the foundation machine making the best fdn. on the grounds; and Mr. D. A. Jones, or any other who may wish, can, if in attendance at the fair, see the Given press and the Vandervort mill making fdn., for they have promised to be here; and Mrs. Dunham, in a card just received, says: "I will, if possible, be there;" and you, in response to a like invitation, which was sent to other makers of fdn. machines, say: "I will try to go, friend Mason, but am not sure I can take a mill;" but who ever heard of Novice hanging back when any thing in the interest of bee-keepers was on foot, and I expect to see you here with your best mill and a "smiling face."

The prospects now are for a fine display, and a general good time among the bee-keepers. The Tri-State Bee-Keepers' Association will have meetings on the ground during the fair. I will cheerfully answer all inquiries in regard to our department, and send a premium list, with rules and regulations, and entry blanks, as soon as printed, to all applicants, and they need *not* "inclose stamp for reply," either.

BEE AND HONEY DEPARTMENT.

Dr. A. B. Mason, Superintendent.	1st Pr.	2d Pr.
Display comb honey in most marketable shape, product of one apiary in 1883	$10	$5
Display extracted honey in most marketable shape, product of one apiary in 1883	10	5
Display extracted honey in most marketable shape, by a lady, product of her own apiary in 1883	5	3
Display comb honey in most marketable shape, by a lady, product of her own apiary in 1883	5	3
Comb honey in most marketable shape, not less than 20 lbs., quality to govern	4	2
Extracted honey in most marketable shape, not less than 20 lbs., quality to govern	4	2
Crate comb honey, not less than 20 lbs. in best shape for shipping and retailing	4	2
Colony bees	5	3
" Italian bees	5	3
" Syrian bees	5	3

Colonies of bees must be the progeny of one queen, and exhibited in such shape as to be readily seen on two sides. Purity of race, docility, size of bees, and numerical strength to be considered.

Display of queens, put up in such shape as to be readily seen by visitors; blacks not to compete	3	2
Greatest variety of queens put up as in display of queens	3	2

Queens and colonies can not compete for more than one premium.

Bee-hive for all purposes in the apiary, may be represented by a model not less than half size	3	2
Bee-hive, glass	2	1
Wax-extractor	2	1
Honey-extractor	2	1
Foundation mill	5	3
Foundation press	5	3
Beeswax, not less than 10 lbs	2	1
Comb foundation for brood-chamber, not less than 5 lbs.	2	1
" " " surplus honey " " " 3 "	2	1
" " machine making the best foundation for brood-chamber on the grounds	8	4
One-piece sections, not less than 50	1	50c
Dovetailed " " " " "	1	50c
Packages with labels for retailing extracted honey	1	50c
Bee-smoker	1	50c
Honey-knife	1	50c
Package for shipping extracted honey in bulk	1	50c
Machine for making holes in frames for wiring	2	1
" " wiring frames	2	1
Display apiarian supplies	3	1
Quinces preserved with honey	2	1
Peaches " " "	2	1
Apples " " "	2	1
Pears " " "	2	1
Largest and best collection of bee literature	2	1
" " " display of honey-bearing plants, properly named and labeled	10	5
Queen-cage, such as is admitted to the mails by the postal laws	1	–
Honey vinegar, not less than one gallon	2	1
" cake, with recipe for making	4	2

A. B. MASON.

Wagon Works, Lucas Co., O., March 12, 1883.

We give the above, mainly to show our readers what Ohio is doing for the encouragement of bee culture, and also as a guide to those who may be deciding in what form to offer premiums, for the purpose of stimulating an interest in our industry.

Heads of Grain,
From Different Fields.

PARAFFINE FOR FOUNDATION.

Do you think it would do to use full sheets of paraffine fdn. in sections? Please give an account of your experience. I intend to try it, on a small scale at least; and if I find there is no danger of melting down, I will use it altogether for comb honey. I think it is foolishness to condemn the use of paraffine for fdn., simply because it isn't beeswax. We make the fdn., and why should we not also make the wax? Paraffine is cheaper, cleaner, and better looking than beeswax. We use it to put extracted honey in, when we wax our barrels, and I have never heard any one protest against its use for that; why, then, may we not have the bees put up comb honey in it? Its low melting-point making it softer at a lower temperature than beeswax, seems to be the only real objection to it. If we can overcome that, no sensible man can object to its use. Now, beeswax is hardened by bleaching. Can we not mix enough of this hardened beeswax with paraffine to make it nearly like ordinary beeswax, without raising it too much in price? As I have a mill, and shall make my own fdn. hereafter, I intend to experiment, and hope others will do the same.

HEART'S-EASE.

M. F. Tatman inquires about heart's-ease (*Polygonum persicaria*) as a honey-plant. From five years' observation, I am inclined to place it at the head of honey-producing plants in this locality. Only one year out of the five has it failed to produce honey. This year almost all of our honey was from heart's-ease. It began to yield honey Aug. 15, and produced a steady flow for about thirty days; in fact, until it grew too cold for the bees to leave the hive. It grows thickly along the roadside, and in neglected cornfields. A late, wet spring produces a luxuriant growth. This differs from smartweed (*Polygonum hydropiper*), which has a slender raceme sparsely set with greenish-white flowers, while the flowers of heart's-ease are thickly set, and vary in color from light to deep pink. The honey that was produced late in the season was the nicest, thickest honey I ever saw. I extracted some in December; and when it got cold (10° below zero before it candied), it had to be cut with a knife, and could be handled like molasses candy. Many persons, too, prefer the flavor to that of clover honey. J. A. GREEN.

Dayton, Ill., Feb. 13, 1883.

Our experiments with paraffine, friend G., were mostly made by mixing it with bleached wax. I think we used about three parts of white wax to one of paraffine. This would roll and work very nicely; but if we used more paraffine, it would break up. We soon found, however, that common yellow wax would bring much more paraffine to working condition than would the white wax, and we therefore concluded that the bleachers, or some one else, had already added more or less paraffine, or some similar substance. I think we made very nice working fdn. with two parts of common wax and one part paraffine. To make sure it would do, I hung sheets in the hive, and fed the bees until they worked it out; and for aught we could see, it worked just as well as real wax. Several hundred pounds were made and sold before we discovered that, although it worked all right in the spring months, it would not do at all in the hot weather of June and July. The combs melted and fell down so badly, that, after tolerating a few of them for a few years, we cut them all out, melted them up, and used the material for waxing honey-barrels. Now, although we used it quite largely for thin fdn. for sections, I can not now remember that we had any trouble with our comb honey in sections. The sections used then were quite a little larger than our present 1-lb. sections, so there would seem to be little danger from it for this use, unless the honey should happen to stand in the sun; in that case it might melt down. It also seems as if it might work all right in brood-frames well supported with wires, and we are told it is used in this way. As we sold it to many individuals when we made the experiments noted above, perhaps some of them can tell us more about it. If so, please speak out, brethren, and thus save us expensive experiments.

SECTIONS FOR 75 CENTS PER THOUSAND.

The veneer sections are made at a fruit-box factory in Benton Harbor, expressly for me. You see, in filling those fruit-boxes with strawberries, the thought popped into my head, Why not use them for sections for honey? Very soon some were on a hive, and in a short time were nicely filled; but they were not the right size; so I saw the proprietor of the factory, and he told me if I would get a spur made, at a cost of $3.00, that would cut them the right size, he would cut them for 75 cts. per 1000. I did so, and have been using the one-piece veneering sections for years. They do not cut the entrances in the sections, but I have a knife made crooked so as to cut them in such a manner as to take a piece out of the edge of the section.

FORMING THE ENTRANCES.

It is fastened to a treadle; I can put ten or twelve sections under the knife, come down with my foot on the treadle, and out come the entrances. I put them close together in the hives, mostly without separators, and I like them better than any dovetailed sections I ever used; in fact, I never used but 1500 of them, of which 1000 were not worth one cent. I offered to return them by express, at my own expense, but the manufacturer came pretty near calling me a fool, by saying I did not know how to use them, and he would not have them back, and so I have gone back on him. Now about those

FOREST LEAVES FOR WINTER COVERING,

that friend Hasty speaks about on p. 159, JUVENILE. I have twelve hives, with the upper story filled with leaves. After the long cold spell, when the mercury stood at from 12 to 16° below zero for a number of days, I went out to see how they were getting along. On taking off the cover I found the leaves on top frozen together. I said, "Well, well; this will never do;" and the way I went for those leaves was a caution; but before I got down far they were nice and warm — the bees in nice order. What surprised me most was that the hives were all alike, the leaves frozen together on top; but after getting down two or three inches they were dry and warm, and the bees in good order. I hear of losses in different places, and think perhaps this winter will furnish a new supply of wax.

When I tell you that my bees, with the exception of the twelve packed with forest leaves, are in the same place, and in the same condition that they were in last summer, with no packing on top or sides, unless those with sections on can be called "packed," you will have some idea how I felt all through that long cold storm; but after it was over, and I went to examine them, when I lifted off the cover, out would come a "nose" to see who was meddling; and if they were hybrids, out would pop a bee. I felt better. I found them all in good condition. But, May is not here yet, so good-by until then. WM. L. KING.

Sodus, Berrien Co., Mich., Feb. 23, 1883.

Thank you, friend K. If the demand were sufficient, we could supply veneer sections at about the price you mention, with something added for cutting the entrances, and for boxing. If I am correct, there is a trouble about molding, unless they are put up just about as soon as made. We have had trouble already with wooden separators in that way. Who can tell us more about it?—I am at present very much inclined to recommend forest leaves for filling the upper story of the chaff hives for winter; but unless the bees were confined below with a loose mat or wire cloth, I am afraid they would get up around the ventilators, and die among the leaves. Have you not had trouble in that direction, friend K.? With larger ventilating holes in the cover, I feel sure you would have got rid of all that ice among the leaves. See the following:—

DAMP CHAFF PACKING, AND THE REMEDY.

Bees did not have a good fly from time winter set in (which was about Nov. 15) till Feb. 16th. Mine are all in good condition except one, in a single-walled hive, which is very uneasy, and has the dysentery slightly. The rest are in Simplicity chaff hives, with inch holes in gables of covers. The single-walled hive had only a hole at one end of the cover, and consequently the chaff packing above the cluster was very damp — so much so that I changed the packing and raised the cover by putting nails under each corner. This shows the necessity of sufficient ventilation above the packing to drive off any excess of moisture. Holes 1½ or two inches in diameter would be better than one inch, the latter not being sufficient in my chaff hives to keep the chaff as dry as I would wish.

JOHN S. SNEARLY.

Williamsville, N. Y., Feb. 25, 1883.

MARKING THE HILLS OF FIGWORT.

C. C. Miller wants something to mark his hills of Simpson seed. A radish seed, or a grain of corn will do it in the spring; a castor bean in the fall.

PALMETTO HONEY.

You speak very highly of palmetto honey from our State. Permit me to give you my experience. I am situated in the pine woods, two miles or more from any other timber. Last spring was so dry that the fire swept over the whole country, and my bees were starving all through April. The palmetto was the first to blossom; I watched that and the bees very carefully. I could see the honey in the blossoms, but the bees did not work much, and the blossoms were covered with two thousand wasps and flies to one bee. For three weeks it was the same, and in the hives but little brood was raised, and but little honey gathered, and that honey was all put around the brood in cells, lengthened with dirty brown wax. The end of the cells was turned up and not sealed; the honey was dark—bad-tasting and fermenting. Remember the fermented honey which Mr. Hart, of New Smyrna, spoke of in GLEANINGS a year or two ago. My conclusion is this, after two years of observation: The saw-palmetto honey is a myth, the bees never gathering any more of it than for immediate use; it ferments in the cells; is not eatable, and dark; also the wax made of it.

ANOTHER REPORT FROM GALLBERRY.

But we have a bush, of which nobody has ever spoken yet, and which is our honey-plant par excellence. It is the gallberry, or evergreen. It grows 8 or 10 feet high, and blossoms profusely the second year after a fire, and regularly every year. The bloom is small and white; comes out at every leaf, and is succeeded by a round black berry the size of a pea, too bitter to be eaten by any thing; so much so that it will hang to the bush for a year or more. As soon as the first flower opens, a new life takes possession of the hive, which fills up in a few days. The honey in comb is snow-white when extracted; of a golden color, very thick and good.

SWEET POTATO AS A HONEY-PLANT.

Another good honey-plant is the sweet potato. When the bees work on them they have the spot you describe on bees which work on the touch-me-not, only it is of a pale yellow.

A HONEY-VINE WANTED.

Which is the best vine for blossoms and honey, and to cover a paling fence? AUG. LEYVRAZ.

Palatka, Fla., Dec. 20, 1882.

BEES IN CELLAR WITH NO COVERING.

Mr. C. J. F. Howes, in his article on upward ventilation, page 186, Apr., 1882, gives my views almost entire. Last winter I put 3 colonies in cellar, with upper stories on. One had a covering over the frames, the others had not. Some time after, I thought I would fill the upper stories with chaff; but to my surprise I found the one that was "blanketed" had dysentery, while the others had as sweet a smell as in summer; consequently I dispensed with the chaff, and those two wintered well, while the one that was covered dwindled till it had to be united with another.

CHAFF HIVES VS. CELLAR.

I have used the Root chaff hive for two winters, and think it by far the best way. I intend to winter all in chaff hereafter.

SEPARATORS.

My experience with tin separators has been, that the bees will work in the sections sooner without, and I have not had much trouble with crooked combs if starters were used.

FRIEND HUDSON'S FIRST SWARM.

Wm. Flickinger's report on page 299, June No., 1882, reminds me of my first experience with bees. My father bought 3 swarms, and gave me one. I was delighted at once, and used to sit for hours and watch them work. Sometimes they would alight on my face, and were so gentle I soon got the fever. The next spring I bought a swarm in a box hive for $4.00; transferred them, and sold $16.00 worth of honey in the fall (which looks small beside some of the "big bee-stories," as friend Bannon calls them), but was "big" in my estimation. M. L. HUDSON.

Charles City, Ia., Dec. 26, 1882.

CHAFF HIVES, ETC.

I have 20 swarms on their summer stands; 15 in the Root chaff hives, and 5 well protected with chaff in hives of my own make. The bottoms of those five are a trifle damp, but the chaff hives are all perfectly dry. Give me all the chaff hives I need, and if my bees are in a proper condition in the fall I honestly believe that the wintering problem has been solved as far as I am concerned. I have 8 others in a small, dark, and well-ventilated cellar, doing very well so far. If chaff hives were ready for them last fall, they would have been quite as well off, with a great deal less handling. My report for last season is not worth a cent. We had plenty of flowers, but they would give no honey, except a little to keep the bees breeding. My stock in April was 17 good swarms; sold one in May, and 2 nuclei and several queens in July, and increased to 28, and got about 200 lbs. of honey; some in sections, and the rest extracted. To improve my stock I bought one of Mr. P. L. Viallon's selected tested queens, and also one of Doolittle's very best. I am well pleased with those two, although I had some excellent ones before.

THOS. C. DAVIES.

Pittsburgh, Pa., March 10, 1883.

POISON PROPOLIS.

I am troubled with the propolis poisoning my hands. It acts the same as poison oak. What is a sure cure for it, or, rather, a sure preventive for it? The honey prospect is poor; too much wind and too little rain.

B. L. PRESSLY.

Santa Paula, Cal., March 1, 1883.

I am inclined to think that in your case, friend P., the bees have been collecting propolis from some poisonous tree or plant, for I never heard of such a case before. Has any one ever had a similar experience?

UPWARD VENTILATION, ETC.

I had six hives of bees last spring. I had to feed in June. The last of July they got the swarming fever. I used up my hives, and I then tore down the queen-cells, and put the bees back. When frost came I had 17, some good and some weak. I thought I would try upper ventilation. I had two late August swarms, very small; they made some comb and some honey, but not enough to winter on. I left the slot in the honey-board open, and fed in the upper story; kept feed in all winter. They are all right now. Two that had no upper ventilation died. They were strong in numbers, and left lots of honey. I sold two; two died, and I have 13 colonies left.

WM. ALLHANDS.

Belmont, Cass Co., Neb., March 5, 1883.

HONEY-BEARING HONEYSUCKLES.

Referring to friend Washington's report of the honeysuckle on page 135, March No., I will here say that we have on our grounds here several *Lonicera, Tartarica*, or Tartarian honeysuckles. This is an ornamental shrub which blooms in this climate during February and early March. The blooms are white, very fragrant, and our bees are on them all the time, just roaring. I presume friend W.'s is a wild variety, as our country produces several kinds, both vines and shrubs, from New York to Florida. They are increased by cuttings, layers, and seeds. While I look upon many of the family as "splendid bee forage," I am of opinion that they generally bloom too early in the season to amount to any certainty for this purpose.

R .C. TAYLOR.

Wilmington, N. C., Mar. 10, 1883.

DRILLING FRAME-STUFF FOR WIRING.

I wrote I could drill a hundred frames in three hours [see p. 69]. As this was about the number I drilled after supper, I said three hours. I find, on further use, the machine does even better than I thought when I wrote, and I can drill about a hundred frames an hour. I, too, first tried a Morse twist-drill, but the 3-cornered point beats any thing I have tried. I have not broken the first one yet. I see you have the thickness of the slide to hold frames wrong; but I think if any one goes to make one he will readily see where the trouble is. It should be so the point of the drill comes in the center of the frame when the pieces are put on.

FOOT-POWER BUZZ-SAWS — A SUGGESTION.

Tell the boys to put the balance-wheel of their foot-power saws in a frame by itself, like a counter-shaft. This gives a longer belt, can be more easily converted into a counter-shaft in case power is added, and if any cheap stout men are about, can help tread without being in the way. It takes up a little more room this way, but I think it is more than made up in other things. The saw I made several years ago, and afterward changed for power, so I could not replace the balance-wheel, I have recently rigged up in this way, and it does better than ever.

G. W. GATES.

Bartlett, Tenn., Feb. 21, 1883.

REPORT OF THE FIGWORT, AND THE WAY FRIEND M. MADE THE BEES FIND THE HONEY.

I can't hold back any longer, for I want to tell you of those Simpson honey-plant seeds I got of you year before last. I sowed them, and about half of them came up, and my bees would not notice them; so last year I took them up and set them out in a little patch, and then the bees would not notice them. So I took some honey and poured on the plants, and in about one minute my little patch was loaded with bees. After this I had no further trouble, for the bees knew what I planted them for. I must say, they are a great curiosity; for I could see the large spots of nectar in the little flowers, and showed it to my wife.

J. P. MALE.

Pleasant Hill, N. C., March 2, 1883.

CYPRIANS, AND THEIR ABILITY TO STAND EXPOSURE. THE WAY THEY WINTERED IN SPITE OF NEGLECT.

I shamefully neglected my apiary, consisting of 13 colonies of Cyprians, last fall and winter. They were left on their summer stand, some with supers on, and some with them off, without any protection. The winter was long and very severe; some time during which, the hogs got in and rooted some of them over, in which position they lay for an unknown length of time, with the caps off, and the frame in one jammed down together, and the snow drifted in on top of them. At this date they are all strong and vigorous, including the one hived on the fifth day of September last. I would add, that they all had an abundance of downward ventilation.

Jem, Mo., Mar. 14, 1883. C. S. CALLIHAN.

Friend C., it is said that an "honest confession is good for the soul," and it may be it is; but even if your bees did come out strong, I should hardly want to advise that treatment. Very likely they had abundance of all kinds of ventilation, and may be that was what they wanted; but for all that I hope no one will think of copying your way of bringing it about.

THE "POINSETTIA," AGAIN.

On page 123, March No., is an article on the new honey-plant (?), *Poinsettia pulcherrima.* Friend Holtke writes that they would yield more than basswood. He also asks if any one has tried it. I have two plants in my conservatory, and observed, during January, the lovely drops of nectar oozing out of the seed-balls, and I was delighted over the looks of things as friend Holtke when he went into that greenhouse. About a week after observing this, I conceived the idea of testing the relative merits of the blacks and Italians under a forced existence, as you might say. The result of this experiment appears in the March No. of the *Bee and Poultry Magazine.* The first thing I did after the bees got accustomed to their new quarters, and were working on syrup and artificial pollen, was to bring to their notice the wealth of honey to be found in that most beautiful plant with scarlet bracts. I took more than a dozen bees during the day and quietly placed their "bills" in contact with drops of nectar. They would insert their bill just once, and then wipe it off on their trousers, and walk away disgusted. During the whole time I had them in my conservatory (two months) I never saw them work on this plant.

John Aspinwall.

Barrytown, N. Y., March 16, 1883.

FROM 16 TO 22, AND 1965 LBS. OF HONEY.

The first of May, 1882, I had 16 stands of bees, all weak, and the first of December I had 22 stands; sold 3 for $20.00, and 4 went off; got 1215 lbs. extracted honey, and 750 lbs. in sections; have sold $182 worth, and have $40 00 worth on hand yet, besides what we have used, and that has been considerable. My bees are all Italians. I use the L. hive, and make all hives and fixtures myself. I was looking through my bees to-day. I find 4 stands dead. All have had the dysentery this winter. We have nice weather now, and bees are getting some honey from soft-maple.

W. L. Miller.

Chariton, Ia., March, 1883.

FROM 4 TO 18, AND 500 LBS. OF COMB HONEY.

Started in spring of 1882 with 4; increased to 18, and 500 lbs. comb honey; lost two; one starved, and the other froze. I shall have to double up two of them; that will leave me 15 in good order. They had a fine fly the 4th and 5th of March, and how they did carry off rye flour! I can get 12 colonies for 20 lbs. of honey each for one year. Do you think it will pay? I am getting all of increase.

A.W. Spracklin.

Cowden, Ill., March 9, 1883.

I should take them, friend S.

FROM 3 TO 9, AND 150 LBS. OF HONEY.

I began the season of 1882 with 3 colonies — 1 Italian of Hayhurst's stock, and 2 hybrids. Italians increased to 9 by natural swarming; 2 hybrids to 4. One swarm came off Aug. 20, and one Aug. 21. Both have plenty of stores to winter on. All are packed in sawdust, except two, which are in cellar. I sold three late swarms at $3.00 each, and have taken 110 lbs. of extracted honey and 50 lbs. of comb honey in 1-lb. sections. No surplus till basswood bloomed.

HOT SMOKE FOR CURING BEE-STINGS.

I noticed in Gleanings that one bee-keeper cures stings by the application of smoke, which cure, the editor thinks, is imaginary, or that the pain ceased through the imagination of the person. I think the mind has an influence over the body; but last summer, when I had my thumb mashed with a foot-adze, and eased the pain by holding it in the smoke of burning wool, I could not think it was imaginary, but real. A brother-in-law of mine, working in a sawmill, in turning down a log, ran the spout of an oil-can through his hand, coming out about the middle of the palm, giving him great pain. A neighbor came in and applied smoke from burning wool, which he said took away all pain in five minutes, and never pained him more. I have known it tried in several instances with much the same results.

Webster, Ind., Dec. 9, 1882. J. P. C. Steddom.

It would really look, friends, as if I should have to give up, that smoke does some good. Let us now, while we accept the facts furnished, at the same time apply to the matter the reason God has given us all. Is it really probable, that puffing smoke on the outside of the thick hard skin of the hand could have any effect in allaying the pain caused by poison injected deep into the flesh? I can not think the smoke alone has any such virtue, but relief may come from another cause. Some years ago I slipped off my mill that ran by wind power, and fell about 14 feet on to the frozen ground. The ankle received the shock; and it was so painful in a few minutes that I begged for chloroform. Several things were tried, but without relief, until a friend brought me a pail of hot water. It was tempered so it would almost scald; and as soon as my foot was dropped into it, the pain was gone. In half an hour I went to work, but kept my foot in hot water, changing as often as it got so cold the pain would come back. I have often thought this ought to be published, although I have never heard any satisfactory explanation from physicians respecting the matter. Now, then, friends, are you sure it wasn't the heat of the burning wool, or the blast of heated air, rapidly passing over the flesh so as to raise the temperature quickly, that did it? Of course, the remedy is none the less valuable; and now when you get stung, just heat up the place vigorously with a "hot-blast" smoker, and I shouldn't wonder a bit if it stopped the pain. Don't you think I ought to be among ranked scientists, and rewarded with a leather medal?

HONEY THAT WILL NOT GRANULATE.

My honey does not granulate. That obtained from bees that died in 1880 was kept in an open vessel in the comb till fall, in a cupboard, then strained and put in glass fruit-jars, and some of it kept till we had new honey this season, and showed no graining. Honey that we extracted Oct. 5, what is left of it, has stood in stone-jars and pails, covered with shingles and newspapers, in a cold room. It is very thick, but shows no grains. I don't know what plant it is got from. Blackheart was abundant here last fall also.

M. E. Knowlton.

Sanneman, Illinois.

WIRING FRAMES—ANOTHER "KINK."

Some of your correspondents would like a device, to be used instead of the holes for wiring frames. This is the way I do: I take ¾-inch wire nails and drive them through the top and bottom bars, where the holes should be—the heads on the outside. Then with a pair of small round-nosed plyers turn hooks on the point end of the nails. The time gained in hooking the wires on, over that needed to thread them through holes, is more than equal to the time required to put in the hooks. E. S. EASTERDAY.

Nokomis, Ill., Mar. 7, 1883.

I declare, friend E., I don't know but that you are right, for the nail-heads along the top-bars would not disfigure it at all. I will have our girls try it, and report.

FROM 1 TO 4, AND 125 LBS. OF HONEY, ONLY.

I can not make my bees "store up" honey like the rest of you bee-raisers. It does seem to me that you all can make your bees store up as much honey in a couple of weeks as mine would in a whole season. I'm almost ashamed to tell you, that last spring I started with one hybrid stand, and the increase was three good swarms and 125 lbs. comb honey, and each hive well filled with honey and bees for winter. That was the best I could make them do. A. COREY.

St. Marys, Auglaize Co., Ohio, Feb. 16, 1883.

Well, it is *really* too bad, friend C., that you couldn't make your one swarm of bees do any better than to give 125 lbs. of honey, and increase to *four strong colonies ready for winter*. Suppose you had a hundred, and did as well with all of them, where would you be?

STARTING NUCLEI BY MOVING A WORKING COLONY, ETC.

I started last spring with 10 colonies and increased to 23, and secured about 375 lbs. surplus, all in 1-lb. sections. It was a very poor season, and the box-hive men (the bees around here are all kept in box hives, except mine) secured no surplus honey at all. About the first of June I moved a strong colony of blacks, and set an empty hive in their place, giving a comb very full of young larvæ and eggs from an Italian queen. There was quite a flow of honey at the time, from locust. They started two queen-cells, and filled nearly every other cell with honey, covering up eggs and larvæ. They had plenty of sheets of fdn. at the time. I moved another hive in the same way later, and gave them a comb of larvæ and eggs from a very bright swarm of Italians, and they raised a queen whose bees are pure black, as nearly as I can tell. I have never seen the queen. Can they be hybrids, or did the old queen come back? Will friend Doolittle tell us how many feet of comb and brood he gives his bees when he crowds them up to put on his sections, and have them store honey enough in the brood-chamber to winter on? J. WOOLSEY.

Bedford, N. Y., Feb. 26, 1883.

If the queen was reared from pure Italian brood, the bees can't very well be black, friend W. I think some young queen must have got in. The old queen could not very well get there by moving the hive.

FRIEND KEPLER AND HIS NEW OPENING-UP IN TEXAS.

I have just opened 25 colonies of fine bees, shipped by freight from Chattanooga, Tennessee. They were closed up, and on the journey 10 days; all opened up in fair condition, without broken combs, and are now flying freely. I have settled on my ranch of over 1000 acres, and have a range over tens of thousands of acres of horsemint, clover, mesquite-trees, sensitive plant, broom-weed, sage, etc. Hoping to be able to report better success in this "land of promise" than in the barren coal measures of the Cumberlands of Tennessee, I am yet hopefully,—

D. KEPLER.

Hubbard City, Texas, Feb. 26, 1883.

CALIFORNIA MOUNTAIN SAGE.

You advertise in your catalogue the seed of California white sage (*Salvia argentea*). Now, if Prof. Rattan, and the Geological Survey, "Botany of California," are any authority, the *Salvia argentea* never grew in California, at least no mention is made of it. The "white sage" which has built up the reputation of California honey, is not a true sage, but it belongs to the genus ranking next to Salvia in botanical character. Its true name is *Audibertia polystachya*. A close relative, the *A. stachyoides*, ranges further north, and is but little inferior for honey. Quinby's New Bee-Keeping makes the mistake of saying, that "in California the main dependence is on 'white sage' (*Eurotia lanata*"), page 61. *Eurotia lanata* is a dwarf plant growing only in alkaline soils in the extreme northern and eastern borders of the State. It is useful only as stock forage after other resources are checked. It is sometimes called white sage, and sometimes "white fat."

ANDREA NORTON.

Gonzales, Monterey Co., Cal., Feb. 18, 1883.

Thanks, friend N. All I know about our sage seed is that it was sent us from some of the bee friends who have the sage honey, and therefore I think the seed is right, even if the name is wrong. Will Profs. Cook and Lazenby please help to set us right in the matter? and will some of the friends in California please mail them samples of the sage that bears the honey? I presume there will be no trouble in getting both leaves and flowers now.

BLUE THISTLE.

I see by some of the late numbers of GLEANINGS, that some are apprehending danger to the farming community by the introduction of blue thistle. I am not in favor of introducing dangerous plants; but I must say, from past experience I apprehend no danger from this plant. It made its appearance here more than thirty years ago, and is one of our best honey-plants. I had about 7 acres of it the past summer, from which my 20 colonies of bees gathered about 600 lbs. of section honey with pure white capping and excellent quality, bringing 25 cents per lb. Besides my own, there were 40 colonies of bees belonging to another apiary working on it. Sumac is a good honey-plant here, but takes double the labor to get it out of the land that blue thistle does.

AMBER SUGAR-CANE.

The package of seed I purchased of you last spring I planted on the 6th of June, and got a good yield. There were three stalks that grew among it with seed like that I inclose, which ripened about a week in advance of the other. Are you acquainted with this variety? And will the seed raised here deteriorate too much in one season for planting, or will it do for several years? I tried the plan recommended in GLEANINGS for clarifying with clay, and some others; found clay the best. J. W. WALKER.

Greenspring, W. Va., Feb. 27, 1883.

I do not know any thing of the early variety you found, friend W. Northern-grown seed is preferred by some, when it is well ripened. Thanks for item on blue thistle.

CEMENT AROUND THE ENTRANCES.

I have been trying for some time to think of something cheap and substantial to keep the grass and weeds from growing around bee-hives. How would cement do? have you tried it? it costs only about $1.00 per bbl., and I should think one barrel would answer for several hives, by scraping away the grass and putting down a thin layer. If you think it worth trying, let us hear from you through GLEANINGS. JAS. ERWIN.

Gainsville, Ky., Dec. 14, 1882.

Cement was long ago suggested, friend E., and, if I am correct, tried to some extent. Would not the frosts of winter break it up? We rather give the preference to clean white sand.

BROOD-REARING IN WINTER; DYSENTERY, ETC.

The bees will be very scarce here in the spring. I know of one man who has lost 9 out of some 20 hives, and others that are losing more or less. I have lost one stand up to the present, and have three others that are diseased. I can not account for their getting diseased altogether. I think sometimes it is caused by brood-rearing. The hive that I lost has been trying to rear brood all winter, and it has been so extremely cold that the brood would chill in the best of cellars here, when the thermometer stood at from 30 to 60° below zero. I think that the brood dies; then it sours, and begins to taint; and, as a natural consequence, the honey and pollen around the brood become stale; and as it is consumed first, I think it generates disease and dissatisfaction in the hive, and makes the bees noisy, and they eat the more; and if you ever noticed, the bees commence to move from comb to comb, and eat every thing before them until they get full and almost rotten, and then fall off and die.

LATE, THIN, DARK HONEY NOT NECESSARILY PRODUCTIVE OF DYSENTERY.

I have one swarm that came off the 20th of August. I put it into a hive without any comb or fdn.; it filled the hive partly full of comb and thin black honey, and I thought I would see how it would winter without any feeding. I put it in the cellar, and have kept it clean and nice, and there have been the fewest dead bees under it of any hive I have in the cellar. J. E. DAVIS.

Mill Creek, Wis., Feb. 14, 1883.

Your idea has been many times suggested, friend D., and no doubt you are at least partly right. Brood-rearing, and its attendant consumption of pollen, is without question one great cause of dysentery, and I believe we are pretty well agreed that bees winter just as well, at least, without pollen. We are glad of that experiment to show that even late dark honey may winter bees safely. I presume this hive did not have any pollen, or at least very little.

For several years past I have kept bees on a limited scale, and find it to be a pleasant and remunerative business here in Texas. I generally obtain 100 lbs. per colony annually, from black bees. But while my bees are doing well, my health is on the decline, and I must seek a milder climate.

HOW FAR MAY SWARMS GO ?

It has become a question among my neighbors, as to the greatest distance that bees will travel after swarming, in search of a suitable place to locate. Two of them have captured swarms of Italians clustered near their premises; and it is an evident fact, that at the time there were no Italian bees owned within less than 18 miles of either of the lucky parties. It appears from the above, that bees will sometimes fly many miles away to seek a new home.

WHITE POLLEN.

In the month of January, for two years past, my bees have gathered a beautiful white substance that has every appearance of pollen; but at that season of the year there are no flowers in bloom. Where they obtain it is a mystery.

Honey in our home market is worth from 12½ to 16 cts. per lb., if in good shape. My entire experience has been with the black bee; but if I emigrate to Florida I shall stock up exclusively with Italians. J. H. HOLYFIELD.

New Boston, Bowie Co., Texas, Mar. 4, 1883.

It may be, friend H., that bees fly as far as 18 miles; but I should be very doubtful about it until it was thoroughly proven. Are there no forests where the Italians could have located and sent out the swarms you mention? You know they often send out a swarm only a few months after they have swarmed.—Is not the white pollen simply flour that they have stolen from some neighboring mill, or other similar source?

TWO QUEENS IN A HIVE, AND BOTH FROM ONE LOT OF CELLS.

Is it not an unusual thing, in cases where two queens are found in one hive, to find them from the same batch of queen-cells? A friend has a hive which became queenless in June, and remained so despite my best efforts to requeen it, till the 22d of August. It then had a laying queen which was only 5 days old. A week aferward my friend saw a very handsome queen emerge from the hive, and, after a five-minutes' flight, re-enter, then emerge again after ten minutes, and after fifteen minutes re-enter. A month afterward I found two queens in the hive. One was quite dark, and her wings were quite dilapidated. The other was a fine large yellow queen, and was doubtless the one which my friend had seen taking her wedding flight. I have heard of old queens which have became somewhat enfeebled, allowing a daughter to help them in their peculiar duties; but I do not remember to have heard of two queens, from the same batch of queen-cells, living in harmony in the same hive. JAMES MCNEILL.

Hudson, N. Y., Oct. 9, 1882.

A few such cases have been reported, friend M.; but from your description of them when last seen, I should still be inclined to think, by some chance or mishap, they were mother and daughter, after all.

FROM 78 TO 130, AND $650 WORTH OF HONEY, AFTER ALL EXPENSES WERE PAID.

I started the season with 78 colonies of hybrid and pure Italian bees; increased to 155 by natural swarming, except building up 10 nuclei; did not accept any after-swarm; all were returned to old colonies; there are now 130 colonies in cellar, and the rest are chaff-packed on summer stands. I made 4000 lbs. of white-clover honey, all in 1-lb. sections, and two barrels of mixed extracted honey, about 700 lbs.; all is sold but one barrel of extracted; the whole, after the expenses are taken out, has netted me $650. I have 3000 sections filled with comb (from which I extracted the mixed honey), for use another season. W. ADDENBROOKE.

North Prairie, Wauk. Co., Wis., Dec. 6, 1882.

POLLEN AGAIN, AS THE CAUSE OF DYSENTERY.

Hearing that you and many other prominent bee-keepers, through journals, recommend sugar syrup to winter bees on, as it keeps them from geting the dysentery and spotting the hives, I gave it a thorough trial for two seasons, and think there must be a mistake somewhere. I have had them spot the hives quite badly, after making it a point to extract every drop of honey from them very late in the fall, after all honey had ceased altogether, feeding in its place 21 lbs. of the best A No. 1 granulated sugar syrup to each colony. The sugar syrup has a nice body, having been brought to a boil, and skimmed; and the syrup that is in the hives now is as sweet as when it was fed to the bees, and it has not candied any, it being about like honey itself. The bees appear to be in excellent condition, the colonies all being strong; and for the hives, they were all new chaff hives last summer, and are nice and dry now. How can you account for it? But I think I have found out where the trouble comes in. I think it is all in pollen. I may be mistaken, but it is my opinion that, in a prolonged cold spell, the bees will eat pollen before they will leave the frames they are occupying, as most hives will have honey or syrup stored right over pollen in the same cells. I have just examined some of the combs that prove my assertion most clearly (that bees eat pollen); and the trouble is pollen, and not sugar nor honey. The trial this winter was with 15 colonies. They had pollen, but no honey. Bees are doing nicely now. It is the first day for them to carry pollen, and they are carrying fast.

ARE BEES ABLE TO MOVE EGGS FROM ONE CELL TO ANOTHER?

I am experimenting with an observation-hive in the house, keeping the bees in bondage. I expect them to develop something new, as I am watching them very closely. I have seen the queen in the act of laying, come out of the cell (as if annoyed by the worker bees), with the eggs attached to her yet, not leaving any in the cells, when the workers would seize the eggs from her and deposit them in the cell for her. She did not fail very often; but when she did, the bees at once deposited the eggs in the cell. I watched the proceedings with a magnifying-glass, and am sure of what I say. The above is quite in harmony with my article in last-year's GLEANINGS on workers stealing eggs to raise queens with, as I claim to be the first to discover it.

BEES KILLING HORSES, ROBBING, GOING ON RAMPAGES, ETC.

Fifteen of my hives are not 6 inches apart (entrances facing one way), 5 of which are not a foot from the walk on which my wife, children, and visitors are constantly going to and fro, and the whole 15 are not more than 18 feet from three stables where horses are kept all the time, the nearest hive being only 6 feet from one of the stables, and whole is in quite a dense portion of the city, and I have the first complaint to hear yet. They gave me 8 swarms and 300 lbs. of extracted honey last summer, which was very nice, besides some queens I sold. Most of the colonies have your dollar queens, which turned out very nicely. C. H. BEELER.

Philadelphia, Pa., March 18, 1883.

Very likely you are right, friend B., that with plenty of pollen the bees might have dysentery in spite of the sugar syrup, when plenty of pollen was in the hives. In our locality very little pollen is wintered over. Suppose you try, next time, clean combs and sugar syrup.—I believe it is generally accepted, that bees have the ability to move eggs; but, friend B., are you not mistaken about being the first to suggest it? It was talked of many years ago.—Your bees have behaved well, it is true, and I believe they do *generally;* but suppose they get to robbing some grocery, and get well stirred up and demoralized; I think you need to be pretty careful in such a locality.

WANTED, A RECIPE FOR MAKING HONEY VINEGAR.

I have nearly four volumes of GLEANINGS, and the A B C; but I can find no recipe for vinegar, only that honey will make excellent vinegar. There is one in "Honey as Food and Medicine," but I don't want any thing to do with whisky. I think it can be made without that. R. J. FOX.

Natick, Mass., Feb. 21, 1883.

I have noticed at the conventions recently, very pretty samples of honey vinegar, and doubtless these friends will be quite willing to tell how it is made. Let us hear from you, friends. Bee-men never keep their light under a bushel.

FROM 7 TO 28, 35 GALLONS OF HONEY, AND $128.80 IN MONEY.

Last spring I commenced with 7 stands; increased to 28. The last swarm came out the 15th of September. I sold it in the fall for $7.50. It is in good condition at the present writing. I extracted about 35 gallons of honey, and had considerable comb honey. I lost five during the winter. I sold 20 stands the 24th of Feb. One stand brought $9.00; 2 brought $7.00 apiece; one $6.00; five $5.70, and eleven $5.80 apiece. It was a very stormy day on which I had my sale, or I should have done better. I intend to change my place of residence, hence the sale of my bees. I like to handle them. REV. JAMES M. REES.

Lenox, Taylor Co., Iowa, March 5, 1883.

A NOVEL BIRD-HOUSE.

If you or any others who bought any of my dipper-gourd seed last spring have more gourds than is needed for dippers, just hollow them out as you would for dippers, only cutting a smaller hole, and then hang them up on your apple-trees, out-houses, etc., by driving a couple of nails through the handles, and let the blue-birds, wrens, etc., take possession of them. I used quite a number in that way last spring, and when the young birds peeped out it looked "too 'cute for anything," as the girls would say.—Bee prospects look blue in this vicinity; about equal to two years ago. Cause, starvation, as there was no fall honey gathered to amount to any thing. S. P. YODER.

Vistula, Ind., March 13, 1883.

DEVELOPING YOUR HOME MARKET, ETC.

Last spring I had 43 colonies, all in box hives. They did nothing to speak of until after the 4th of July. Some colonies were killing drones the 5th of July. The colony that I noticed killing drones the latest in the season made 115 lbs. of box honey. Ten colonies gave me 847 lbs., and my whole crop was 2000 lbs. I increased to 57 good strong swarms, and sold about all my honey at from 12 to 16 c. per lb. net. I have been much benefited this season by the advice given in GLEANINGS in regard to finding a home market, and not shipping to commission men. As soon as my honey was off the hives I began trying to obtain the names of responsible grocerymen in near-by towns, and wrote to them, stating the kind of honey I had, the weight of a crate, and the price at my place. I had orders enough from those men to take all my honey. I am still receiving orders for more, and at an advanced price, but no honey to fill them with. Every man who ordered a sample crate has ordered more. Not one found a word of fault with the honey sent them. I mention the last, because I think it very important, in sending honey to a groceryman, to send nice clean boxes, well filled, packed in good neat crates; and if there is more than one tier of boxes packed in the crate, one above the other, there should be two or three thicknesses of newspaper placed between the boxes, so that, if one of the top boxes leaks, the honey will not daub the boxes below. THOS. ROTHWELL, 67.

Austinville, Bradford Co., Pa., Nov. 27, 1882.

"SQUARE MEN."

Many dealers in honey and apiarian supplies fail to fulfill their contracts, and I have a list of them which I had thought of sending you for publication; but upon further reflection I concluded that it would be better to send the names of those who do fulfill their contracts to the letter, *and more too.* Chas. F. Muth writes to one of our apiarists (Oluf Olson), "Your honey is first-class, and compares favorably with the best Northern honey. I have concluded to give you ten cents for it, instead of eight, as agreed upon." All who have dealt with Mr. Muth speak of him in terms of the highest praise. So also of Merriam & Falconer, Jamestown, N. Y. Now, friend Root, is this not the better way,—give praise to those deserving of it, and those who are not, give them a most severe letting alone? Will not such a course be an incentive to others to be more upright and honorable in business? "*Exempli gratia.*" GEO. J. ALDEN.

New Smyrna, Fla., March 12, 1883.

POINSETTIA IN ITS NATIVE HOME.

On p. 123 there appears an article about honey from Poinsettia pulcherrima. Friend Holtke is getting pretty enthusiastic over it; but I am afraid he will look in vain for any poinsettia flowers in summer. The poinsettia blooms in Mexico, where there is no winter. They are an exceedingly beautiful sight when in full bloom in a greenhouse. They bloom about Christmas time and New Year's. The drop of honey is quite large, and is not an accidental phenomenon. They produce only one crop of flowers in a year. Ants are very fond of working on them. F. HAHMAN, JR.

Philadelphia, Pa., March 7, 1883.

By referring to page 123, it will be seen that the plant in question was incorrectly printed *Poinciana pulcherrima*, for which we beg pardon. It should be read as in the heading; but we trust the honey will be equally sweet in either case.

WINTERING UNDER A SNOWDRIFT.

I have kept bees for four winters, and have tried the cellar and the summer stand, but have lost more or less every winter. Last fall I placed my hives along a stone fence running north and south, on the east side, where they drifted under the snow very evenly, and there has been two or three feet of snow over them all winter. A few days ago I examined them and found them in splendid condition. They are the strongest and brightest I ever saw. In the spring the snow had melted away from the sides of the hives for a foot, but it was solid over the top till a warm spell a week ago; then it thawed so that I could get the cover off to examine them. I had 6 inches of chaff over the frames. The top of the chaff was damp, but the bottom was dry and very warm. There has been considerable loss in bees in this section where they were in single hives with no protection.

ANOTHER HIVING-BAG.

I was looking over the different arrangements for hiving bees, but see none like mine. I take open cloth, cheese-cloth is best, and make a bag a little larger than a two-bushel grain-bag. I place two hoops in it, one near the bottom and one about the middle. To keep it open at the top I put a pair of wire jaws, like a valise or carpet-bag, with hinges at the corners, then sew the bag to the jaws, and it is ready for business. Where the swarm is on a small limb I put a ladder as near to the swarm as I can, then take my swarming-bag, take a jaw in each hand, and open it over the swarm and the limb it is on; clasp it together, and give the limb a shake. You can draw it off the limb, or clip the limb off with your knife. You can now clasp the jaws close together, and hang it in the shade while you look after another swarm before you hive them. I have one that is fixed on a couple of poles 12 feet long. The poles are fixed to the jaws like a pair of tongs. I can reach the bag up to a swarm, clasp the jaws over it, give the swarm a shake, and draw it off the limb, and get almost every bee.

Clarkston, Mich., March 20, 1883. H. FLEMING.

FRIEND WALKER'S "DOUBLE GIFT."

In reply to your question, I would say that it is a new partner in our firm — she who used to be Miss Warren, and whom the school children (with whom she is a great favorite) still persist in calling "Jennie." She joined us about half way between Christmas and New Year's, being a sort of double gift, you see, and slightly changing her name; as a sort of mutual accommodation, she writes for me by direction, out of sympathy for "ye typo," during her spare moments, taken from her work as school-teacher and housekeeper. BYRON WALKER.

Capac, Mich., March 4, 1883.

You see I only asked him (very innocently) how it happened his articles of late are so nicely written, phrased, and punctuated, and the above is his answer. Friend W., may the time never come when you forget to thank God *daily* for such a "gift;" and as you value your own peace of mind, see to it that too many cares never make her old prematurely.

GETTING A START FROM A BEE-TREE.

I have kept bees on a small scale about five years. I found a bee-tree, and it had a good supply of honey and comb. I got an old bee-man, and he transferred them into a Langstroth hive. They did not swarm any that season (August), but wintered well in a dry-goods box packed with fine straw. The next spring I bought two stocks in L. hives; increased them to 16 hives; extracted about 400 lbs. of honey; wintered in cellar; lost all but 8, from not giving them upward ventilation. Last fall I put in cellar 21 stocks. March 11, I took out 20 in good condition. A. BRYAN.

Oskaloosa, Ia., Mar. 17, 1883.

Ladies' Department.

WELL, friend Root, I want to talk to you a little while, just as a scholar does to his teacher. On page 403, J. G. P. speaks of wingless bees, and you say that they are so because they have worn their wings out; but he says they are young bees, and I think he means bees that have never flown because they could not, as they did not have good wings to fly with, as that was the way with a good many young bees from my hive. They never had any wings to fly with. You ask in another place what it is that bee-keepers want to breed for. There are three points that I should think would be wanted. First, best honey-gatherers, as that is what they are kept for; second, prolificness; as the more bees there are, the more there are to gather the honey when there is any to gather. Third, gentleness. Am I not right so far? Who could want a larger swarm than that four-foot one, or larger yields of honey than we read of in GLEANINGS? and these qualities, with the gentleness of Italians, would, I think, suit any one. Perhaps a cross with the Italians and Cyprians, as this, you say, removes the vicious habits of the last named.

GLOVES OR MITTENS.

Why not make linen *mittens* instead of gloves? Every woman could make her own, if she wished. I tried to work with gloves the first time I tried to handle my bees; but I soon took them off and rolled my sleeves up to the elbows, and I work that way whenever I handle them. All the stings I got was when I pinched one accidentally.

Some one (I do not remember who now) wants a carpet for the tin slides to queen-cage. I sent one to you that I thought would do. The paper was not very clean, but it was the only piece that I could find, of the kind I wanted. Why not put wax on all of the wood part of the cage?

MRS. CLARA S. LOCKWOOD.

Canon City, Grant Co., Oregon, Feb. 10, 1883.

BEES IN WASHINGTON TERRITORY.

Oh! I think if you could only see our bees fly it would make you feel quite young and lively. It is the 2d day of March, with the thermometer 70° above zero; sun shining as warm and bright as in May. Grass and all vegetation is showing signs of life and activity. Our bees have been at work every day since the 25th of Feb. on balm-of-Gilead and willow, gathering dark-brown glassy-looking wax. Can you tell me what they do with it?

FIREWEED SEEDS, ETC.

Now about this fireweed business. I am besieged on all sides for seeds; and as you have got me into the scrape, I think it only fair to help me out. The fireweed seed is exhausted until June, when it begins to ripen. Then I will save seed for all who want, if they will inclose a three-cent stamp; but I can not pay postage. Here is a man (card inclosed) who wants seeds or roots, but sends no stamps. The roots will cost 30 or 40 cts. postage; but he expects me to send them free, to advance bee culture! Do you think that is right? When I wanted seeds of honey-plants sent from Texas I paid 50 cents for 60 seeds, and was glad to get them at that; but they would not grow here after I got them.

MRS. NELSON KELLEY.

Ferndale, W. T., Mar. 2, 1883.

I think, my friend, the dark-brown glassy *wax* is propolis, although it seems strange to have them gather propolis so early in the spring. I am glad to know you have so pleasant a locality.

Do not be in haste to think evil, my good friend. I know the man who wrote you the card, and I assure you he will cheerfully pay for all he asks for. Very likely the friends are a little thoughtless about asking for seeds or roots; but where they know you have the seeds, I am sure they will willingly inclose the stamps needed. If they are not sure you have them, it would be quite natural to first send a postal of inquiry, as in the above case. Bee-men, as a rule, are fair and liberal, and *always* gentlemen. Are they not, friends?

FROM 5 TO 16, AND $87.00 WORTH OF HONEY.

As our loved one (our boy Homer) is gone, I will try to send a report of what the bees with his care did last summer. We had 5 stands in spring; increased to 16, and sold honey at 15 cts. per lb., to come to $87.00. We new beginners have many trials. One of ours was bees gathering so fast that we had no place for them to store it, and Homer had to go to Striker, 18 miles distant, to get sections, which we buy in the flat, and he was to borrow Mr. Rogers' extractor; but as there was another man there to borrow it, he bought it, and had to give $10.00. It is a very old one he had got of A. I. Root. We extracted 75 lbs. of honey. We buy our hives in the flat; bought 30 for one dollar each, and two wide frames with sections for each hive. This made $10.00 more.

BEE CULTURE FOR GIRLS.

Our daughter Alice, nearly 18 years old, is making the hives. She is to have half of every thing that she makes. She is to be our bee-keeper. You must send GLEANINGS to her. MRS. M. C. ZELLER.

Pioneer, Williams Co., O., March 19, 1883.

We extend to you our sympathy in your affliction, my good friend.—Bee-keepers, as a rule, are not in the habit of classing floods of honey among the "trials;" but, on the contrary, the *trials* are when the honey doesn't come. We welcome Miss Alice into our ranks, and shall be pleased to hear from her.

Notes and Queries.

CHICKWEED POLLEN.

BEES wintered well; no loss so far. I wintered in 1½-story hive, with 2 inches of chaff on top. First honey and pollen were gathered yesterday from chickweed. The day was pleasant, and I found some of my Italians over two miles away from home. The pollen from chickweed is a very dark brown. W. A. HAMMOND.

Richmond, Va., Feb. 25, 1883.

A HEDGE-PLANT WANTED THAT BEARS HONEY.

Can't you furnish me with hedge-plants of some sort that would be good for bees, and make a good cheap hedge-fence for a garden too, such as the Japan quince, or something else as good.

C. W. KENDALL.

Mooney, Jackson Co., Ind., March 22, 1883.

[Who can supply the honey-bearing hedge-plants?]

VENTILATION.

Some who formerly wintered successfully have lost largely. I think they wanted more ventilating at the bottom. Some on the ground, with half the bottom out, are all right. E. PICKUP.

Limerick, Ill., March 2, 1883.

THAT PREMIUM LIST.

Friend Root:—Please say, at the head of the Tri-State Fair premium list that I sent you for publication, "Entries in this department are free to all." A. B. MASON.

Wagon Works, Lucas Co., O., Mar. 19, 1883.

[The above was received too late to insert in the proper place.]

THE CYPRIANS, AGAIN.

I had one swarm of Cyprians that gave 100 lbs. of surplus honey, and drew out 30 frames of foundation. They are the crossest bees that I ever saw; the worst hybrids are gentle to what they are. Smoke only angers them. If any one goes close to the entrance, they will fly out after him. A. CARDER.

Hebron, Boone Co., Ky., Dec. 30, 1882.

FASTENING BEES IN THEIR HIVES; A CAUTION.

While I was in Ohio in February I had three swarms in chaff hives melt down. Every comb went out of the frame. It was caused by closing up the entrance with wire cloth to keep them in.

Millington, Mich., Mar. 14, 1883. M. D. YORK.

[Thanks for the warning, friend Y. So many such cases have occurred, that I have always felt loth to advise fastening them in at any time of the year.]

FROM 2 TO 7, AND 100 LBS. OF HONEY.

I forgot to tell you I started in last season with 2 hives of bees, and now I have 7. I think they are all well supplied with stores, and will get through the winter all right; at least, I hope so. I got about 100 lbs. of honey. All I know about bees I got by practical experience handling them last summer. I like to work with them. My experience so far with them encourages me in the work. J. HELBER.

Farmington, Francois Co., Mo., March 8, 1883.

The two-frame nucleus I bought of you did well. I divided them, and have two hives; the first hive filled up in September more than full of honey. It contains two cubic feet of space. I drew the first premium at the county fair, and sold a 2-lb. section of comb honey for $1.00. Comb honey retails here at 28 cts. per lb. There are no bees in this county, nor in three or four adjoining, except those I got of you. C. C. BRIGGS.

Harrisville, Alcona Co., Mich., Feb., 1883.

BEE-VEILS; ARE THEY BAD FOR THE EYES?

What is the effect on the eyes, of wearing a coarse bee-veil, like mosquito-bar? I was thinking, if my bees promise well this summer, of getting some of the one-piece sections of you; but does not Mr. Forncrook claim a patent on them? Or do you stand between your customers and all damages?

Otsdawa, N. Y., Mar. 19, 1883. THOS. DECKER.

[I do not think the use of a veil would be harmful, unless the eyes were weak and very sensitive. Mr. F. has for some time threatened to prosecute, and I am told is threatening yet; but my advice is now, as it always has been, pay no attention to his threats. If my customers should be so unwise as to pay money in answer to any such foolish demand, I should not want to be responsible.]

FLOUR FEEDING.

Will you please tell me if it is best to place before the bees all the dry flour they will work up this pleasant weather?

SALT WATER FOR BEES.

Also tell me if you feed salt in a weak solution. Out of 80 swarms I went into winter quarters with, I have now but 40 alive.

CLEANING OUT COMBS.

Will the old comb need any renovating before using again? Ought the dead bees to be picked out of said combs? MRS. DONNELLY.

Valmont, Col., March 10, 1883.

[As a general thing, give them all the flour they will take; but I would not let them get the combs too full of it, or it may harden in the cells.—We feed salt, a weak solution, when they seem to want it.—Set your old combs, one at a time, in the center of a strong colony, and they will take out the dead bees and clean them up. All these questions are answered more at length in the A B C.]

The "Smilery."

WELL, friend Root, you may put me down in the Smilery, for my bees are all alive and in good shape. I have fed them for several days. I feed outdoors, plenty of rye meal and melted sugar, so all can have a chance; and 'tis wonderful to see the amount of meal they will carry away. I have 12 stands, and have taken 8 more on shares. They are also in good shape. That makes me 20 to start with this spring. J. N. C. GRAY.

Atwood, Ill., March 7, 1883.

Bee Entomology,

Or Enemies of Bees Among Insect Tribes.

A STRANGE BEE-ENEMY.

WE received by mail a bee-mole from William Little, of Marissa, Ill. He says it crawls into the hives, where mice can not go, and eats comb and honey and bees. We forwarded it to Prof. Cook, who says:—

The little mole-like animal sent by Mr. Wm. Little, of Marissa, Illinois, is not a mole at all, but a shrew or field mouse. It is closely related to the moles, and not to the common mice. Mice, rats, squirrels, etc., are rodents, or gnawers, which fact is evident in their peculiar chisel-shaped teeth. The shrews and moles are insectivorous animals and belong to the order *Insectivora*, while common mice belong to the order *Rodentia*. I have often heard of these shrews in Missouri and Illinois, as engaged in robbing the hives of the bees in winter. The little animals are so very small that they can sometimes push or crowd through a hole less than ⅜ of an inch in diameter. The little shrew sent by Mr. Little, measures only 1.75 inches in length. The color is brownish, the nose pointed. The anterior feet are slender, like the same in mice, and not fossorial, as in the moles, which are such expert diggers. This is a short-tailed mole, and is the *Blarina exilipes*. It is found from Tennessee and Virginia to Illinois, Missouri, and even south to Mississippi.

Its mischief can be prevented only by fencing it out. The perforated zinc would shut it out, and still permit the exit of the bees. A. J. Cook.

Lansing, Michigan, Feb. 27, 1883.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

FROM A REAL, LIVE, AND DESERVING "CANDIDATE."

WHEN one is a candidate for admission into Blasted Hopes, I suppose that a recital of his woes is the "open sesame" that gives him entry into that doleful company. When I read in GLEANINGS of the enormous yields of honey the "blessed bees" have honored some of my fellow-Texans with, I am convinced we have either the greatest honey country in the world, or the champion exaggerators of the age. I asked a friend who knows one of these "bee ranchers" well, how it was about Blank's big honey yarns. "Oh!" he replied, "he draws on his imagination for his facts, and his drafts are never *protested*."

Having had moderate success with bees in box hives for a number of years, I took the bee fever (and *you* are the man who gave it to me), and invested about *seventy-five dollars* in the business, and went at it "scientifically," "sorter." I increased last spring from 18 to 40, and sat down in the shade to wait for the profits. Being a patient man, I am waiting yet. I now have 25 colonies; my extractor is rusty for lack of use, and my disgust at the little winged idlers is so great that a wholesome dread of after-claps is all that prevents my kicking the hives when I pass them. Out of the queens you have sent me, I have only one left, and she is mother of as predacious a set of yellow rascals as ever vexed an apiary. They excite my admiration — sometimes, and *pointedly* too. Set a pan of scraps of comb down anywhere, and it will soon be covered with bees; but after half an hour there will be no bees around that pan but Italians, except a few black bees that have the very "solidest" reasons for remaining. Why, an Italian, to show his contempt for the natives, will alight in front of a black hive, and bite every bee that comes in. I wouldn't be at all surprised if they should take to waylaying the other bees, and just squeezing the honey right square out of 'em.

But I have not told of my success yet, or, rather, want of it. While the Navarro man and the Hallettsville man and others were getting seven or eight hogsheads of extracted honey from a single colony every week or two, I was moping around, my mouth watering for a single *bite*. I think if they don't do any better this year, I'll get out a writ of "rouster," and eject the last rascal of 'em. They are worse tenants than the "man and brother," for you can get a little rent out of the darkey — sometimes. When a man has to go round with his eyes swelled shut, his hands as big as hams, and his lip looking like a "damaged sausage," he feels that a little pecuniary solace would beat soda as an antidote for bee-stings.

We have had a very cold winter. This remark may not be original, but it is true, nevertheless. We had the thermometer 12° below freezing, twice. The fruit-trees are in bloom, as well as elm, wild peach, etc., and I see the bees are busy bringing in pollen; but that doesn't interest me. I don't like pollen as a diet, and I can't sell it. Honey is what I'm after, and its rhyming friend — money. I have a mate for Meyer's "moth-trap-ketch-'em-alive hive," that rests in such inglorious ease in the fence-corner. Mine is not tenentless, however, although I have not sampled its sweets in going on two years. But my "jeremiade" is growing tedious. Adios, amigo. W. P. Laughter.

Morales, Jackson Co., Tex., March, 1883.

Very good, friend L. I am glad you got up and spoke your piece. Here is a $5.00 bill placed to your credit for giving the boys so timely a warning, and for doing it in such a cheerful way too. Now don't borrow trouble, but just keep right on, let the bees gather pollen; and if you don't ere long have cause for rejoicing, we shall have a regular contributor for this department, and a good one too.

I have received the sample copy of GLEANINGS you sent me, and am well pleased with it; and from now on you can count me a regular subscriber. I have had some experience in bee-keeping, but not with so good reports as some of your readers have had. In Dec., 1878, I bought two stands of bees, and in April, 1879, they died. In 1880 I bought one swarm which swarmed two times, and the next winter they all died. I have spent $25.00 for bees and hives, and have not received one cent in return. I think this will counteract some of the reports in your paper; but as I see my friends have done so well, I have resolved to try it again; and if I live till next winter I may report the results to you. J. H. Rolwer.

Mt. Carroll, Ill., Feb. 26, 1883.

I thank you, friend R. When I first read your letter I was congratulating myself on having got a real good one for this department; but now I see that you have not been a subscriber until recently, and that spoils it all. You see, we want to get all of these dismal reports we can in here, from those who are right among our A B C scholars, and who are taking GLEANINGS right along.

I have had very poor success with my bees. I have now four stands alive, and in good shape; but I have taken but very little honey from them. I generally have to feed them more honey than I get from them. I have them in the Simplicity hive. I don't think that I shall ever succeed with them so as to have any such luck as some of them claim to have. It may be they make from one thousand to fifteen hundred pounds of honey from 4 or 5 stands, and increase to 18 or 20; but if they do, it is all right; but they look like "fish stories" to me. I have black and yellow bees, and they seemed to be very strong; but they can't carry such loads of honey as some of those fellows in GLEANINGS claim. Well, I will keep my bees just to see them around, and I will take GLEANINGS just to see how other folks manage their bees, and hear the yarns they tell about getting honey. So, send it along; and if I don't get honey I shall have bees and GLEANINGS. George W. Brown.

Anderson, Ind., Dec. 20, 1882.

Friend B., I should say you needed a fresh supply of all three of the Christian graces; viz., faith, hope, and charity. Do you not? Keep working, and hold on a bit, and you will soon see.

Our Homes.

O righteous Father, the world hath not known thee: but I have known thee, and these have I known that thou hast sent me.—JOHN 17: 25.

OVER and over have I felt of late that those who ignore or oppose the teachings of Christ our Savior do so without scarcely comprehending or understanding what it is that they do oppose. Not only do they fail to comprehend what it is that Christian people want, or would do, but with a sort of unconscious perversity, if such a thing were possible, they go so very wide of the mark, and fail so utterly in recognizing the work that Christianity seeks to do, that even the contemplation of it seems sometimes awful. One little circumstance now comes to mind, to illustrate the point I wish to make. Several years ago, during Mr. Moody's labors, it was remarked that he on some public occasion prayed for the Spiritualists. It was said they were greatly offended at this, and proposed, by way of retaliation, praying for Mr. Moody. The idea they seemed to have of the matter was, that Mr. Moody would feel greatly hurt, or offended, in case they should turn around and pray for him.

In the first place, these people, it would seem, were offended because they took it for granted that Mr. Moody had, right in the midst of his prayer, a purpose of hitting a little clip at them, as he would have done had he been one of some rival political clique, or party, and that his greatest desire was to have his own party succeed. Again, they would have it that Mr. Moody would feel hurt, or offended, if they should retaliate by praying for him. They seemed to have forgotten, or perhaps had never heard, that Mr. Moody has, all through his ministry, constantly asked the prayers of praying people, nor did they understand that prayer is always for the highest good of the person prayed for, no matter by whom offered. Christ came into the world to bring "peace on earth and good will to men," and to make it plain, so that no one need misunderstand, the angels heralded forth the fact with voices from the skies.

A little over 400 years ago, people were content to live and die along the borders of a body of water, without any man being able to say what was on the other side of it; or, still worse than that, until the day of Christopher Columbus, no man was able to say whether or not there was any other side at all, and yet all that was wanting was simply to sail out of sight of land and explore; and this, too, while a temperate clime and fair and favorable winds offered every facility for such exploration. Just think of it, boys! If children then were like the children of to-day, we might imagine some inquiring youngster of less than a dozen summers saying,—

"Pa, what is there over t'other side of the big water?"

"I don't know, my boy."

"Why, pa, doesn't anybody know?"

"I do not think anybody knows, my son."

"Why, don't you think, pa, that there must be ground away over there, and that some kind of folks live there as we do?" How do you suppose the father could stand such questioning? I wonder if all the boys knew of it when it first began to be noised abroad, that a man had suggested the bold project of starting out with a fleet of ships, to see whether or not there wasn't something in place of nothing away over beyond that vast, dim, blue expanse. Did they have newspapers then, and was it the absorbing topic of conversation? Just think of it. But a few years have passed since then, comparatively, and yet just because there is a small spot around the frozen poles that man has not troden, expedition after expedition has gone out, and many valuable lives have been sacrificed. In this case no one expects any thing like a new continent, or a new race of people either; but it is the furor for exploring unknown regions, and for knowing more of the earth on which we live. This thirst for knowledge is not confined alone to geographical matters either, but the whole realm of nature and thought is being ransacked in the same way. Every avenue that promises even a shadow of a chance for giving an insight into something we did not know before is canvassed in much the same way. Every year that passes witnesses some new element of nature called in to serve man; with electricity we have banished night; with the telephone we have annihilated distance, and muscular strength is fast being relieved by new machinery that makes hard labor a pleasant pastime, instead of a back-breaking drudgery.

Now, friends, is it true that all these great strides are confined to science and mechanics and travel? Has nothing been done in the way of making men better and purer, and more worthy of communing with God, who is truth and righteousness itself? I rejoice to think that something is being done in this very line. I feel sure there was never before a time when the profession of Christianity meant so much as it does at this present time. I feel sure, too, there never before was a time when only the genuine coin would pass current as is the case now. We are just beginning to learn that there are depths of wisdom in the teachings of the Savior that have never as yet been hardly glanced into, and that the unexplored regions lying there yet to be opened full to the light of blazing noonday are beyond any thing that has yet been brought to light in the realms of science. See here:—

Verily, verily, I say unto you, He that believeth on me, the works that I do shall he do also; and greater works than these shall he do; because I go unto my Father.—JOHN 14: 12.

Is not that a promise? Do you believe any one has yet sounded the depths of all there is in that little verse? What are the conditions, and how shall we do these works that are even greater than Jesus himself did? It is expressed in the little verse very plainly and simply. He that *believeth* on me. While I read the words over, there comes that old feeling over me again, and I want to read them over and over. It is easy to say we believe; but our actions tell more truly than our words whether we really believe or not. When Moody left his situation in the shoe-store, and spent all the day long in laboring for the salvation of the street Arabs in Chicago, his actions showed he believed in the Savior. He knew these lost ones ought to be cared for by somebody. He knew that Jesus had said,—

> For I was a hungered, and ye gave me meat; I was thirsty, and ye gave me drink: I was a stranger, and ye took me in: naked, and ye clothed me: I was sick, and ye visited me: I was in prison, and ye came unto me.—MATT. 25: 35, 36.

And he believed what he said was true. How wonderfully was the promise fulfilled in his case, in only a few months! He had, in his own rough, boyish way, sought first the kingdom of God and his righteousness, and most wonderfully had all things else been added. He had lost his situation, lost his money, and all his little earthly store. God remembered him, and money was poured down at his feet until he had to tell them he had no use for more, and asked them to take it away. Somebody has said that God is seeking opportunities to shower down blessings upon us, and lets them come just as fast as he sees he can do so, and not do us harm. When God saw that Moody was safe, that he trusted God, then could God trust Moody. He could trust him through great prosperity, and through great worldly praise. Are you sure, reader, God could trust you throughout the same?

God intrusted to Peter and John the power of working miracles. Is there a man living who could be trusted with such power to-day? Can you think of any one whom you know, any one that you have read of, who could be safely intrusted with the power Peter had to heal the sick, and not have it spoil him, and make him grow proud when it should be taken up and heralded right and left, as such a power would be nowadays? If the one who possessed this power fully believed in Jesus, believed in him more than he believed in the power of money or the power of fame and praise and renown, of course he would be safe; but who is there who would stand the test of such an ordeal? I have many times given a queen to a queenless colony by simply dropping her on a comb separated a little from the rest. The glad news of a queen in the hive would quickly spread, and in a very short time all the bees would join in a regular stampede from all parts of the hive, just to get near and touch, or take a look at the wonderful new comer. With the present intelligence and thirst for knowledge, I can readily imagine we might have about such a rush from both the Old as well as New World, should God ever again confer on one human being the power that Christ and his followers had. Who is there that, under such circumstances, could preserve a simple, unwavering trust and faith in God?

Have we any examples, at the present time, of great blessings poured out upon those who have or who do trust in God, or believe in the only begotten Son of God? We have, for one, Mueller, of England, who commenced a few years ago asking God to send him the means for putting in practice his project of saving the orphans of that great city of London; and although he has never asked a copper of any one but God, in answer to prayer he has now received over four millions of dollars, and is at present almost a standing miracle, showing what faith and trust in God will do. His greatness is in his simplicity. His whole life is devoted and bound up in the care of those orphans, and his work seems to be very nearly in the line of that of our Savior while here upon earth. Mueller lives and works for them, having nothing of his own, and pleasing not himself, even as Jesus pleased not himself during his sojourn here.

Wm. E. Dodge, of New York, lately deceased, is another instance of a man who lived for others, and who was greatly blessed with means almost unlimited. Other cases are coming up, and becoming more and more frequent, of wonderful prosperity poured out to those who use it for the good of their fellow-men, until it really begins to seem as if the day were fast coming when all men shall agree that godliness is indeed profitable, and that selfishness and greed not only make their possessor unhappy, but by no means enable him to gain in the end in worldly store.

There is another great field for explorations, and I am sometimes inclined to think it is as plain before our eyes as was the great expasne of unknown waters before the eyes of our fathers. I am inclined to think, too, that as wonderful a new world lies over in that direction as Columbus found when he pushed out boldly, in accordance with his "belief." Columbus believed in land beyond the great sea, and his work showed plainly that his belief was sincere; so sincere that he *trusted* himself on the broad expanse of waters. The world did not know America then. Jesus said, "O righteous Father, the world hath not known thee." The world does not know God much better than the world then knew of that new land. When those who have had views of the new Jerusalem tell of it, the world will not then believe. Is it not so? Let us try a familiar little text:—

> Blessed are ye, when *men* shall revile you, and persecute *you*, and shall say all manner of evil against you falsely, for my sake.—MATT. 5: 11.

How many believe this, as Columbus believed in his new venture? How many are willing to accept it, and trust their lives on it? It has been before the world for centuries, and almost all men have admired it and recommended it. Jesus said you are to do right; and after having done right, you are to keep quiet, look happy, and be happy. He said you must not worry nor be troubled, no matter how badly wicked people act. A young minister once said he wanted religion enough so that when folks lied about him he could feel happy over it. A kind of sad feeling comes over me when I think of this speech of his. It sounds more like the speech of a young minister than of an old one. It savors of the faith of a new-born soul. O God our Father, give us, give *me* that faith that will help us to rest trustingly on thy promises! Stephen had that faith. When they commenced stoning him, he, instead of stoning back, or instead of looking back on his persecutors, looked trustingly up toward heaven. God honored that look by causing the heavens to open before him.

> And they stoned Stephen, calling upon *God*, and saying, Lord Jesus, receive my spirit.—ACTS 7:59.

He lost his life; but what if he did? Life is a small matter, when you see the heavens opening ready to receive you. The stones were raining down upon him; but even while crushed, bruised, and bleeding, he looked peaceful and happy. With his last breath he prayed that the sin might not be laid to their charge. The natural man, and the world, would have called down curses upon the heads of those who so unjustly persecuted him; but Stephen knew Jesus, and believed in him as fully as Columbus believed in the bright new world when he saw it spread out before him.

Now, friends, there are greater things yet in the line of these little texts. Most of us think we have done a very commendable thing when we have endured persecution and abuse, and said nothing. The fires of passion may rage within; but if we hold on, and don't say a single word back, or at least not a retaliating word, we think we have been pretty heroic. If we go further than this, and disarm our angry persecutor by a pleasant look and smiling face, we think we are getting to be almost a saint. Well, it is a pretty good thing to be able to do this, and it almost always makes us feel happy, after we have fought such a fight; but to the one who so thoroughly believes in God and the Son, there is an experience far beyond all this. There is a point attainable by all Christians where trials and difficulties bring only greater happiness. Is this matter new to you? Read:—

> Blessed are ye, when men shall hate you, and when they shall separate you *from their company*, and shall reproach *you*, and cast out your name as evil, for the Son of man's sake. Rejoice ye in that day, and leap for joy: for, behold, your reward *is* great in heaven: for in the like manner did their fathers unto the prophets.—LUKE 6:22, 23.

There it is. When you are unjustly accused, when somebody tries to hurt you because you *are* doing right; when they from jealousy seek to wound you, instead of getting stirred up about the injustice of the attack, why, just be really happy, and even *leap* for joy. Do you say, "Mr. Root, why don't you do so?" Well, I am trying to do so.

I have got a view of that new world, just as Columbus got a view before he made a landing. I am working hard every day to get over into that promised land, and take all my family, friends, and everybody else along.

To be sure, there are conditions to these promises; and if we go back and look at the text, we find it reads that persecution must come, for the *Son of man's sake*. It must be for doing *right*, that the persecution comes. Wrong-doing brings trouble; but there are no promises for those who bring trouble on themselves by wrong-doing. Here is where the trouble comes in. The world tells the truth about us, and we get mad about it. If there weren't a *particle* of truth in it we might leap for joy with a very good grace; but the sad part of it is, that we are almost always at least a little guilty; if we did not really do that with which we were charged, we were guilty of being seen in a company that did do such things, or something of that sort. Perhaps appearances were against us, and the Bible says we are to shun even the appearance of evil. You see that the whole matter turns back on us, and we are again faced with the importance of living better lives. When you hear some one complain bitterly of the corruption of the world, you can pretty safely assume that his own heart needs regenerating; or, to put it in another way, when you feel disgusted with the world in general you may safely set it down that wickedness and sin have obtained a lodging-place in your heart, and that the place to commence to reform in the world is right at your own door, with your own self. Isn't it a happy thought, that God has placed every thing so conveniently near to each soul who wishes to make the world better? Columbus had to raise money, and traverse great seas, before he could get a glimpse of the New World; but you and I can find it by not so much as looking over the fence, for that would lead us into our neighbor's garden; but we find it right in our own selves. "For the temple of God is holy, which temple ye are." When God's Holy Spirit comes into the heart the new world is found.

A great many people are troubled about what others do, or rather, perhaps, because they can't do right because others hinder them. I have told you how I once suggested to a minister when he was complaining that he had been misused, that we have a promise of a blessing when we are persecuted, and when people say all manner of evil about us. His reply was something like this:

"Oh! to be sure, my young friend, this is all true, anywhere within the bounds of reason; but when people make asses of themselves, that alters the case."

Before I answer the above, I wish to state that this man was a marked exception to ministers in general; and although a man of ability, and many good traits, this one fault of his had led him into trouble all his life; but now to the question before us: What is a Christian to do, when people make asses of themselves, so to speak? Why, he is to be very sure that he does not make an ass of himself also, but rather, to show by our demeanor that we believe in the promises I have quoted, and that we are looking to God for guidance, waiting for him, it may be, to point out the way for us to act, and, above all the rest, should we show by look and act that we know God, and feel his presence near. If we do this we need have no fear at all of what the world may do; and, in fact, we have only one thing to fear in this whole universe, and this one thing is the perversity of our own hearts. "The fear of God is the beginning of wisdom."

Why, my friends, it is discovering a new world, and moving over into it, when we can realize that it is our privilege to stand so near to God that no one can by any twist or crook crowd us away from him. I know I don't do it always, but I have beautiful soul-thrilling glimpses of that promised land now and then, and I rejoice to think that they come oftener than they did, as the years pass by. If it were not that it looked like boasting, I do not know but that I should like to say I haven't had a real old-fashioned spell of drawing down my face, and feeling cross and dismal, for a good long while. See how the little verse of my old favorite hymn fits in right here:—

Man may trouble and distress me;
  T'will but drive me to thy breast;
Life with trials hard may press me,
  Heaven will bring me sweeter rest.
Oh! 'tis not in grief to harm me,
  While thy love is left to me;
Oh! 'twere not in joy to charm me,
  Were that joy unmixed with thee.

You see, it sums up like this: If unjust persecution only makes you happier, the only *real* trouble you can have in this world is the troubles you bring on yourself by your own sins; and therefore, if your life is one constant effort to serve God, your life should be one constant day of peace and rejoicing.

Now, at the risk of having some one say I am bragging again, I want to tell you of some discoveries I have been making of late. One especially is a plan for making money. There is one funny feature about it, too, and that is, that there is no danger of so many going into it that it will be overdone. You might almost think I had something to sell, by the way I start out; but it isn't any thing to sell at all. It doesn't take any capital to start with. There, I have put my foot into it again, haven't I? for that is just the way all the circulars wanting agents read. Well, I can't help it if it does sound so, and so I will just go on and try to explain what I mean. We are working-people, all of us; we are in business of some kind. We are all working for somebody, or serving some one. With nearly all of us there is some sort of an agreement as to what pay we shall have. If there isn't such an agreement, there ought to be. Don't leave things loose, I pray you; have all the conditions well understood. More than that, make the best bargain for your services you can. I don't like any to work for me who don't care what they get. In one sense, I like to see people want lots of things. I like to see them want good pay too. Well, having got this all fixed, we are now ready for the secret, or for my little discovery, if you will let me call it so. It is to cultivate a feeling of love, friendship, and esteem for the one you are working for. If he isn't lovable, there is the greater discovery in store for you. If he is old and cross and stingy, you have some of the obstacles before you that Columbus had. You see, you have got something to pray about. Ask God, on bended knees, to help you to see something good and lovable in him whom you have perhaps almost hated. Now, don't let it be all talk and prayer, but let your actions show you feel all of this. If it is the man you sell your honey to, cultivate a feeling of gratitude to him for buying your honey. If it is a man who sells you honey, try to feel grateful to him for furnishing such nice honey. Not only that, but study how you can do him little favors that you know will please him. Put it continually this way: "Well, now that is a real good sort of a fellow, and he has really paid me a good price for my swarm of bees; although he bought them just as they are, and didn't say a word about the paint being worn off the hive, I will just paint it over new, before I take it over." In every thing you do in life, get out of your own shoes, and try to stand in the other man's. If you enjoy fun or a joke, here is a wide field for you. Surprise every one you have deal with, by something of the kind he didn't expect. I don't mean you shall give presents, or give a man something he didn't pay for. You know I don't believe in presents at all. Just do every thing well you undertake to do. Where transactions come about that leave room for argument or discussion as to what would be just, fair, or right in the matter, rejoice because it gives you an opportunity of showing your customer that you do truly love him, and feel for his interests. Some of you may object to this advice, by saying you can't afford it. Why, my friend, I am giving it to you as a wonderful discovery for *making* money. Columbus would never have found the New World at all, had he not pushed boldly clear out of sight of land. Well, I tell you, you will make money by pushing clear out of sight of selfishness, and working for the interests of the other man with whom you are dealing.

For whosoever will save his life shall lose it: and whosoever will lose his life for my sake shall find it.—MATT. 16:25

When one has many things to sell, it is now customary to get out a price list of the goods. This price list is a common ground on which the buyer and seller meet. One asks so much, and the other agrees to pay so much. Well, when this price list comes into actual business, a great many unforseen points come up that are likely to lead to difficulties and wrangles. The buyer interprets them to his advantage, and the seller, on the other hand, to his own interest. Now, suppose we reverse all this. Suppose the one who sends out the price list, after fixing his prices, welcomes his customers as he would somebody he was under obligation to, and to whom he was anxious to do a favor; suppose he said to himself, "Well, now, it would not do to give this kind friend things right out, but I will just study his order over, see how much the price list will allow me to do for him, in strict consistence with its readings." My friends, what do you suppose would be the result? Not only would his face beam all the day long with love to God and love to his fellow-men, but (other things being equal, mind you), his business would soon extend to every part of the civilized world, and all men would delight to do him honor.

I will mention only one more opening for exploring into this new world to-day. It is having more confidence in our fellow-men. I do not mean indiscriminate trusting of everybody who asks for credit, but I mean trusting people intelligently. How often do I see good honest hearts pained by harsh ways and even words. I feel like saying, "Why, bless your heart, my friend, this brother would not for the world take a copper of your money." I take real comfort in telling such a one, "Now, look here, old friend, here is some money; just you take it and use what you need, and pay me whenever it comes handy." I know this is a little dangerous advice to give; for the one to whom you give the money must not only be honest, but wise and careful withal. Great harm may be done by using money unwisely. Here are a couple of sentences that came in a letter yesterday:—

> I am astonished that you trust perfect strangers, in the manner you have me, with your money. You must possess unlimited faith in erring humanity.

My faith is in God, my good friend; and through good men, with honest purposes in their hearts, I see God. I felt satisfied, from the tone of the letter you wrote, that you were conscientious, and you see I was not mistaken. I know of the wickedness and sin there is in the world; but I know, too, thank God, that there is something godlike and noble in almost every breast. It may have lain long years unseen and dormant, but it is there still; and to us has God given the great and glorious work of lifting, cheering, encouraging, and helping each other.

I have declared unto them thy name, and will declare it.—JOHN 17:26.

Tobacco Column.

ANOTHER WITNESS.

I HAVE just finished reading an excellent work on tobacco, by Dr. Alcott, and send it to you by today's mail, thinking (if you have not already read it) that you might like to see it. I have been an inveterate smoker and chewer for a good many years. I have often felt the bad effects of the weed, but never tried to break myself of the habit until I began to read so much about it in GLEANINGS. I thought I would first try to break myself of the habit, and, if I succeeded, to let you know, as you seem to take so much interest in the cause. I think I can now safely say that I am *cured*, having not used tobacco in any form since the 7th of Dec., 1882. I will also say, that I feel 50 per cent better for having stopped, and I am going to try to get all of my friends to try the same experiment. R. CUYLER.

Rapidan Sta., Va., March 11, 1883.

Thanks for the little book, friend C., and thanks be to God that you have succeeded so well in breaking away from the thralldom of tobacco.

FRIEND ROSS' EXPERIENCE.

Twelve years ago this June, on the evening of the 1st of the month, all my family being in bed, I was going to have a good smoke; before retiring for the night, my eye caught hold of these words: "The effects of Tobacco." I read it through, and then took the pipe out of my mouth, and said, "By the help of God you never will go in again." I could not be clean in God's sight for using it; and the more I looked at myself, the filthier I was. I promised God, by his help, that I never would use it again, and he helped me through. It was 12 months before I got over it; in cold wet weather the smell of it I liked, and still I would have to get up and leave where it was. I carried a small stone in my pocket for a year or more, and it was in my mouth the greater part of the time. But the Lord helps those who call on him, believing. I used it, I think, from the time I was 10 years of age. Bless God, who giveth the victory over all sin; for the use of tobacco is a sin, as much as cursing or drinking or taking the name of the Lord in vain. Do not think that there were no foes to face. I had to fight it out, and I conquered. When I caught a swarm of bees last August I thought, after reading "Quinby on the Bee," that I would use a little smoke; but then I said, bees can go where they came from, before I use the pipe again. You sent me a smoker. Friend Root, I do not think I am entitled to it, for doing what was right. I thank God that I have no more hankering for tobacco now than if I never used it.

The man who leaves off tobacco must watch and fight and pray; the battle ne'er give o'er; renew it every day, and ask the good Lord for help and strength to overcome all temptations, and he will, I hope, give it. DAVID ROSS.

Ibaton, Kan., March 21, 1883.

If this reaches you before you ship the box of goods I ordered, you can send me a Clark's smoker. I have concluded to give up the use of tobacco, after having used it almost incessantly for more than 20 years. If I ever use it again I will pay for two smokers. S. L. TAYLOR.

Knob Noster, Mo., March 9, 1883.

ONE WAY TO CELEBRATE THE INTRODUCTION OF A QUEEN.

I have been a slave to the weed for 21 years. I began its bad habit in the army, from hunger. We were out of rations for two days; but on August 28, 1882, I safely introduced my first Italian queen. I felt so big I took the tobacco and tossed it into the mud. I would not ask for a smoker, but I had bad luck with the one I got of you. The spring broke. I think a smoker as a prize will help me to keep the pledge; and if I ever use tobacco again I will pay you $1.00 for the use of your smoker. I will do all I can to induce others to quit its use.

Somerset, Pa., Feb. 26, 1883. A. H. HUSTON.

"Remindery,"

Or Department for duties to be attended to this month.

LOOK out now for the bees. Very often more are lost from spring dwindling during the month of May, than any other month in the year. As we often have heavy winds at this season, a windbreak is very important. If they have not yet found natural pollen, I would feed them rye meal, or other substitute for pollen. If you are far enough away from other bees, I would also feed in open air. Manage it some way so no bees will be induced to fly out in unseasonable weather, and get chilled and lost. Every bee counts, now. If you feed outside, feed only as much as will be taken the same day, and that before night, or before it gets so cool the bees can't fly. We use the grooved board for open-air feeding. If other bees are near so you are obliged to feed inside of the hive, I think I should use the Good candy. As bees often need water as well as feed, in some respects the very thin syrup is preferable. If the bees seem in any way feeble or diseased, I should use thin syrup made of granulated sugar. Strong, healthy stocks may be fed at this season of the year any thing they will take. Last year, during May and June, we fed large quantities of the poorest kind of maple sugar, without detriment. Unless the bees have a very large quantity stored in the hive, I should feed regularly at all times when they are not gathering honey from the fields. The reports for last year have been stronger than ever before in favor of heavy and regular feed. Many who fed clear along into July, with almost no hope of any honey crop, afterward secured wonderful crops.

Now to sum up, don't let your bees starve for lack of food; and remember that any kind of cheap food that they will take will answer for warm weather. Always endeavor to feed intelligently; that is, feed in such a way that the colony will be thriving, and building up a little every day; feed about as they get it naturally, to do most good.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, APR. 1, 1883.

And whatsoever ye do, do it heartily, as unto the Lord, and not unto men.—COL. 3:23.

WE have to-day, the 29th of March, 5052 subscribers, for which we are very thankful.

WE are sorry to say, our engraver has not finished friend Muth's picture, so we shall have to keep it until next month.

ALSIKE CLOVER-SEED.

WE have an abundant supply of choice seed, which we can send by return mail, express, or freight, at prices as given in March JUVENILE.

MANY of the friends are ordering heavy goods by express; but when we send them so, they complain bitterly of the charges. Please bear in mind that heavy goods should always go by freight.

OUR A B C book is having a larger sale than ever before. An edition of 1440, although almost just out of the press, as it would seem, is so nearly exhausted that we are obliged to commence at once on another larger edition.

NOTWITHSTANDING the severe winter, the bees have wintered unusually well, as a general thing. A few, it is true, report heavy losses, but they are few comparatively. Among these few we shall have to be classed. Out of 185 prepared for winter in the fall, we have now less than 85 good colonies left. They didn't have a particle of grape sugar either, but they were all used for queening during the whole of last season.

WE shall, in a few days, have a large supply of Cook's new "Manual." It has been recently rewritten, revised, and enlarged. We can furnish it at wholesale and retail in any quantity. The price is the same as for our A B C book.

WE are getting wax so plentifully for 35 cts. cash or 37 cts. trade, that we are inclined to think further advances on foundation will not be found necessary. We have now over 2 tons of nice wax in stock, and more is coming daily. I am very glad to say so, for I do dislike advancing prices.

WANTED, SEEDS OF FIGWORT, OR SIMPSON HONEY-PLANT.

IF any of our friends have any of the above, please let us know at once what they will take for it. At present writing we can't report in regard to the roots, because they are not up yet. The frost is not out of the ground with us.

A GREETING to you all, dear friends! I am now speaking to you for the first time by means of the short-hand system, sitting back in my chair at ease, and gazing around the office in the meanwhile. All that troubles me now is, that it seems so easy that I fear I shall occupy too much space by talking too long.

IN making orders, please be explicit as to what you wish. A lady sent us an order yesterday, saying: "Send me boxes, with the necessary trimmings, for the $15 00 inclosed." We presume she wanted hives; but the next question is, What hives? And as she wants the goods at once, delays and disappointment are almost inevitable.

DOLLAR QUEENS.

FOR all received before the 15th, we will pay $1.25 each. We will furnish them to the friends who wish to buy, for $2.00, and we hope to send them by return mail, as is our custom. If any of the friends think the above too large a margin for taking risks, furnishing cages and paying postage, we are willing to let *them* try it.

OUR friend Geo. Grimm has recently ordered from this office the following, relative to candied honey. It is so "to the point" that we here insert it for the benefit of our readers. We can furnish these labels, gummed or ungummed, with your own name and address, for 75 cts. per 500; $1.00 per 1000, or $7.50 per 10,000.

> **TAKE NOTICE.**—As manufactured adulterated honey can not be made to imitate the granulation or "candying" of pure honey, granulation has been found to be the only ready test of pure honey. I therefore do not ship extracted honey before it is thoroughly granulated by cold weather: and I WARRANT every pound of honey put up and shipped by me to be absolutely pure honey as collected from the blossoms by the bees. To restore to the liquid form and retain its original honey flavor, set can in warm water and remove cover, but do not heat honey to boiling-point. Let cool before using. **GEO. GRIMM, Jefferson, Wis.**

ODD-SIZED GOODS.

As the busy season approaches, we have the same troubles again with odd-sized goods. For instance, a few days ago we received an order for 50 Simplicity hives, made to take American frames. In the first place, we had to sort the lumber to get boards of a different width from those we generally use. Then all the machinery had to be changed. After we got them all done, by mistake the rabbets had been cut in the sides instead of the ends. When it came to packing them up, the packers had trouble, because they were unused to the odd sizes. New crating had to be cut for the packages; several delays and expensive misunderstandings occurred, which would not have happened had we been going along with our every-day work. Besides this the lumber did not come out right, and a few more had to be made to make up the exact number required. A friend wanted a lot of frames the old-fashioned way—sawed pieces without dovetailing. As there was much less work on them, of course he would expect them to be made much cheaper than our regular goods. Now, our regular frames are made on machinery always kept properly adjusted, and the strips are sawed on a gang-saw, four pieces at a time. These for the special order being required of different thickness, must be sawed in the old way, one at a time. The result was, that the material for these frames, made of plain, simple sticks, cost us twice as much as our regular goods. Yet our customer will likely be displeased unless we make them at a less price, because they looked so much cheaper. Again: If any pieces are left they would be simply kindling-wood, made of good nice lumber, because we should have no possible use for the remnants. In making regular goods, of course there are no remnants. Do you see the moral, friends? and will you have charity when we charge you what seems to be exorbitant prices for making things to order after your own fancy?

CONVENTION NOTICES.

WESTERN BEE-KEEPERS' ASSOCIATION.

The semi-annual meeting of this association will be held at Independence, Jackson Co., Mo., on the 4th Saturday (28th) of April, 1883, at 10 o'clock A.M. Papers prepared for the occasion by the President and Secretary and others will be read, and matters of general interest to bee-keepers discussed. A general attendance of persons interested in bee culture is requested. The present membership of this association control two thousand colonies of bees.

J. A. NELSON, Pres't, Wyandotte, Kansas.
S. W. SALISBURY, Sec'y, Kansas City, Missouri.

The Boone County Bee-Keepers' association will meet in the city of Lebanon, April 7, 1883.

Whitestown, Ind. S. H. LANE, Sec.

The Central Michigan Bee-Keepers' Association holds its spring convention at Lansing, in the State Capitol Building on Tuesday, April 17, 1883, at 9 A. M.

North Lansing, Mich. E. N. WOOD, Sec.

The Eastern Michigan Bee-Keepers' Society will hold its annual meeting in Detroit, April 3, in Abstract Hall, commencing at 10 A. M.

Detroit, Mich. A. B. WEED, Sec.

The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883, at 10 o'clock A.M., in the rooms of the Y. M. C. A. M. C. BEAN, Sec.

McGrawville, N. Y., March 20, 1883.

The Western Bee-Keepers' Association meets at Independence, Mo., Apr. 28, 1883.

S. W. SALISBURY, Sec.

The Bee-Keepers' Association of South-Eastern Michigan will hold its spring meeting at Adrian (instead of Jackson), on Wednesday, April 18, 1883. All who are interested in bee-keeping, or are fond of honey, are invited to attend, or send essays, papers, or any implements useful in the apiary. The place of meeting will be announced in the local papers.

H. C. MARKHAM, Sec.

Ann Arbor, Mich., March 15, 1883.

The Tuscarawas Valley Bee-Keepers' Association hold their next regular meeting at City Hall, Coshocton, O., on Wednesday, May 2, 1883, at 10 o'clock A. M. Come everybody.

Clarks, O, J. A. BUCKLEW, Sec.

CIRCULARS, ETC., RECEIVED.

Dr. J. P. H. Brown, Augusta, Ga., has sent us a 20-page price list of supplies from the Pomono Apiaries, including bees and queens. Speaking of the new races of bees, friend B. says: "The Cyprian and Syrian (Holy-Land) bees are only varieties of the species Apis Melifica. I have bred both these varieties, and have studied their physical characteristics and peculiarities, and am satisfied that the Syrian is the original typical bee of the species Apis Melifica. In this I am not only sustained by sacred history, but also by the geographical distribution of the honey-bee."

F. A. Snell, Milledgeville, Ill., sends out a very pretty 16-page price list, 5½ x 3½. Friend Snell is modestly presenting the Eclipse hive for public favor. He also deals in hives, extractors, etc.

E. Kretchmer, Coburg, Iowa, has mailed us his 18-page catalogue of bees, queens, etc.; 5¼ x 2¼.

W. S. Cauthen, Pleasant Hill, S. C., issues a 1-page price list of Italian bees and queens; 12 x 5.

W. W. Cary & Son, Coleraine, Mass., send out a 14-page list of Italian and Albino bees and apiarian supplies, etc. Friends Cary claim to be the "pioneer apiarians" of New England, and are certainly up to the times. The presswork is well done, which is more than can be said for the compositor's part.

J. I. Parent, Charlton, N. Y., issues a 4-page list of bees and apiarian supplies in general, excepting queens. Friend P. thinks hybrids preferable to either race pure, for his locality.

B. Davidson, Uxbridge, Ont., Can., sends us a 10-page list of hives, extractors, fanning-mills, etc.

Bright Bros., Mazeppa, Minn., have printed and mailed us a neat 20-page price list of apiarian fixings; 6 x 4.

J. P. Moore, Morgan, Ky., has sent out a 1-page list of bees and queens; 5 x 7.

Wm. Little, Marissa, Ill., sends us a postal-card circular of Italian bees.

James A. Nelson, Wyandott, Kan., mails a 4-page price list of queens, fdn., etc.; 3 x 5. Friend N. sends a piece of his fdn., instead of simply printing it.

T. S. Hall, Kirby's Creek, Ala., has sent us a nice 16-page list of bees, queens, etc., from his "Sand Mountain" Apiary.

C. C. Vaughn, Columbia, Tenn., has sent us a 2-page list of queens, bees, etc.; 8 x 5.

We have just printed for J. H. Reed, Orleans, Ind., a price list of bees, queens, poultry, etc.; 5¾ x 3½.

G. F. Williams, New Philadelphia, O., has just received from our job rooms a 1-page price list of Italian queens and apiarian supplies; 11 x 7.

Oliver Foster, Mt. Vernon, Ia., is out with a 4-page list of bees, queens, fdn., etc. This also bears our imprint, and is 5¾ x 3½ in size.

S. D. McLean, Columbia, Tenn., has sent us a very pretty postal-card circular of Italian bees.

Wm. Ballantine & Son, Sago, O., have mailed us a circular of bees, queens, and supplies; 5 x 11.

J. H. Woodworth & Co., West Williamsfield, Ohio, have sent us their catalogue of bee-keepers' supplies; 8½ x 6½.

The Model Bee-hive Co., West Philadelphia, Pa., have sent us a postal-card list of apiarian supplies.

B. F. Carroll, Dresden, Texas, has mailed us a very neat 1 page price list of Cyprian bees and apiarian fixings.

MRS. LIZZIE COTTON'S CIRCULAR.

I am being asked my opinion of the new circulars Mrs. Cotton is again sending out quite plentifully. The statements she makes, and the prices she charges for the goods she sends out, would, in my opinion, forbid her being classed with our regular supply dealers, to say nothing of the strings of complaints against her that have filled our bee journals for years past.

SEEDS! **65 KINDS, 40c.** Fine best varieties Cabbage, mixed in one package, 5c; also five best kinds each of Carrot, Cucumber, Lettuce, Onion, Radish, and Tomato, at 5c each; one large package of 30 choice kinds of Flower Seeds, 10 cts. Parties sending $1.00 before May 15th will receive all the above by return mail, and one Italian Queen in July. Send for price list of Seeds. I also renew my offer in March No., which see.

J. G. LEHDE, Gardenville, Erie Co., N. Y.

BASSWOOD-TREES OF ALL SIZES, AND
ITALIAN BEES EARLY IN THE SEASON.
ALSO QUEENS AND BEES BY THE POUND.
Basswood-trees, 8 feet, ...10 cts. each.
" " 4 feet,.................... 6 cts. "
" " 2 to 3 feet,..... ....$2.00 per 100.
" " 1 foot, $1.25 per 100; $8.00 per 1000.
Last chance; send for prices.
3d A. W. CHENEY, KANAWHA FALLS, FAY. CO., W. VA.

BOX-ELDERS.

From 6 to 12 inches high, $1.00 per 100, by mail; 25 cts. by express; 12 to 18 inches high, by mail, $1.50; by express, 40 cts. per 100.

MILO SMITH, Greenwood, Polk Co., Iowa.

THE NEW IMPROVED
STEAM POWER
Comb Foundation Factory.

CHAS. OLM, Proprietor,

FOND DU LAC, WISCONSIN.

THE BEST WORK AND LOWEST PRICE.

PURE YELLOW BEESWAX IS WARRANTED. SEND FOR SAMPLES AND PRICE LIST. 3tfd

COMB FOUNDATION.

Italian Bees by the pound, nucleus, or colony. Queens furnished when desired. Five per cent discount on A. I. Root's prices. For particulars, address

4-6d E. Y. PERKINS, Jefferson, Greene Co., Iowa.

L. E. MERCER,

—OF—

LENOX, IOWA,

Breeds Pure Italian Bees and Queens for sale; Manufactures the Root Chaff Hive, the Standard Langstroth Hive, and the Mercer Chaff Hive. Sections, dovetailed or all-in-one-piece. I furnish every thing needed to run a first-class apiary. Satisfaction guaranteed, or money refunded. Circular and price list free. 4-5d

SEND postal for my 20-page price list of Italian, Cyprian, and Holy-Land Bees, Nuclei, Queens, and Apiarian Supplies.

4tfd H. H. BROWN, Light Street, Col. Co., Pa.

20 ITALIAN TESTED QUEENS

at $1.50 each, if sent in April, from the apiary of Henry Steckler. October raising, 1882. Imported mother; safe arrival guaranteed.

J. W. K. & A. G. SHAW,
4d Loreauville, Iberia Parish, La.

FOR FULL COLONIES OF

ITALIAN BEES AND QUEENS,

4-6d TWO AND THREE-FRAME NUCLEI.

Address P. F. RHODS, NEW CASTLE, HENRY CO., INDIANA.

GREGG RASPBERRY PLANTS

First-class Plants, warranted true to name, only $1.25 per 100, or $10.50 per 1000, by freight or express; or 50 cts. per doz. by mail, postpaid. Also pure-bred P. Rock Eggs. Circulars free. Address

4d S. P. YODER, Vistula, Elkhart Co., Ind.

ONE-PIECE SECTIONS a specialty. Pound size, $1.50 per 1000; L. hives, 50c each. Circular free.

2-6d B. WALKER & Co., Capac, St. Clair Co., Mich.

BEE KEEPERS' GUIDE

28 Pages, 50c. per year.
SPECIMEN COPY FREE.

2-4d **A. G. HILL, Kendallville, Ind.**

PATENT FDN. MILLS.

6-inch, $10.00.
10-inch, $15.00.

2tfd WM. C. PELHAM, Maysville, Ky.

JUST OUT!

New Circular, and price list of Bees, Queens, and STENCILS for bee-keepers' use. 4-9d

JOS. M. BROOKS, COLUMBUS, BARTHOLOMEW CO., INDIANA.

FOR SALE. 10 colonies of Italian and hybrid bees in American 9-frame hives, $5.50 per colony, delivered at express office at Howard Lake, Minn.

4d PAUL SCHLAGEL, Victor, Wright Co., Minn.

HOLY-LAND
AND
CYPRIAN QUEENS
AND
Farm Implements!

I have a fine lot of pure Holy-Land and Cyprian queens which I will sell for one-fourth more than Root sells his Italians. Also a few pure Albinos; they are light-colored, and very gentle.

I keep on hand, and can ship from the factories where made, a stock of Farm Implements, a two-horse corn-planter, with drill attachment; one-horse corn-drills that will plant in hills; a steel-toothed harrow in three sections, with lever to clear from trash, or pass over obstacles; spring-tooth harrows; common harrows, with 40 or 50 teeth; sulkey hay-rakes; sulkey cultivators, plow-sulkeys, etc. Send for Circular.

H. B. HARRINGTON, Medina, O.

4-FRAME NUCLEUS.

I have so many orders booked for nuclei that I would urge those anticipating to order from me to do so this month, as I am afraid I shall not have enough bees and queens to fill orders promptly, if orders come in as they have lately.

4d **P. L. VIALLON, Bayou Goula, La.**

Wanted to Exchange.

A hive of pure Italian Bees in Simplicity hive for FINE poultry of any of the following breeds: "Bolton Grays," "Scotch Grays," or "B. B. Red Games."

Address SILAS H. HICKOK,
4d Box 268, Bethel, Fairfield Co., Conn.

100

Colonies of PURE ITALIAN BEES for sale cheap. Queens all bred from imported mothers. Send for circular. C. C. VAUGHN, Columbia, Tenn. 4-5d

FOR SALE!

200 or **300** colonies of Italian Bees in Langstroth hives in good condition. Price, single colony, $6.50; 10 or more, $6.00 per colony. Hybrids, 50 cts. less. I will guarantee safe arrival.

4 5d C. GRIMM, Jefferson, Wis.

1883. ITALIAN QUEENS! 1883.

Still they go! Bees for business now ready to ship. Send for our new circular of Queens, Full Colonies and Nuclei. It tells how to introduce queens.

4d T. S. HALL, Kirby's Creek, Jackson Co., Ala.

BE SURE

To send a postal card for our illustrated catalogue of

APIARIAN SUPPLIES

Before purchasing elsewhere. It contains illustrations and descriptions of every thing new and desirable in an apiary,

AT THE LOWEST PRICE

Italian Queens and Bees.

J. C. SAYLES,
1-6d Hartford, Washington Co., Wis.

BEES AND QUEENS FROM MY APIARIES.

QUEENS AND NUCLEI IN SEASON.

3tfd Circular on application.

J. H. ROBERTSON, PEWAMO, IONIA CO., MICH.

1883— —1883

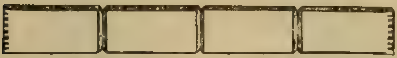
WANTED.

ORDERS FOR EARLY ITALIAN QUEENS!

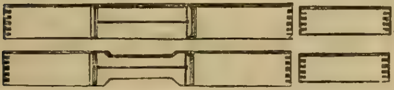
Three fine imported queens, to breed from, and 80 colonies of Italian bees. All will be devoted to queen-rearing. Single queen, $1.00; 11 for $10.00. Send for catalogue of Bee "fixin's." Beeswax wanted. J. S. TADLOCK,
2-12d Box 42, Luling, Caldwell Co., Texas.

HIVES, SECTIONS, &c.

Langstroth, Simplicity, and other hives.



The Lewis One-Piece Section. V groove.



The Lewis Two-Piece Sections. V groove.

We make the one-piece, two-piece, or four-piece dovetailed or nailed Sections, any size, from half-pound to 6x6x2 inches, or any other SUPPLIES for Bee-Keepers, made of wood.

4¼x4¼ of any of the above kinds of sections,	$4 50
All other sizes, larger to 6x6,	5 00
Half-pound sections,	3 50

Send for Price List and illustrations of our NEW HIVE for comb honey—something new, just out. Price Lists will be sent only to those that write for them. **G. B. LEWIS.**
Watertown, Jeff. Co., Wis., Feb. 1, 1883. 2tfd

HEADQUARTERS IN THE SOUTH

FOR THE SALE AND MANUFACTURE OF

BEE-KEEPERS' SUPPLIES

Root's Simplicity, and V. D.-N. hives, frames, sections, foundation, etc.; Italian queens and early 4-frame nuclei a specialty. See advertisement in January, 1883, GLEANINGS; and for further particulars, send for my Illustrated Catalogue.

25 cents cash, or 27 cents trade paid for beeswax.
2tfd **P. L. VIALLON, Bayou Goula, La.**

1883.

COLONIES, NUCLEI, AND QUEENS,

FOR SALE CHEAP.

For terms, address
S. D. McLEAN,
2-5inq COLUMBIA, TENN.

1883.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

VON DORN'S FOUNDATION

GIVES SATISFACTION.

Recommendation: 300 per cent increase in sales in 1882. BEESWAX WANTED. Send for circular.
3tfd M. C. VON DORN, 820 S. AVE., OMAHA, NEB.

FOR SALE.—Sixty colonies of Italian Bees, in 10x11 Gallup frames, with fixtures, $6.50. If taken at my apiary, $6.00.
3d JULIUS FROSCH, Elmore, Ottawa Co., O.

DADANT'S FOUNDATION.

—UNSOLICITED TESTIMONIALS.—

Nothing is better; your fdn. suits exactly.
Cincinnati, O., Oct. 23, 1882. CHAS. F. MUTH.
The finest and brightest I ever saw.
Adamsville, O., March, 1882. GREEN R. SHIRER.
Best I have used; no breaking down; bees take it readily. W. B. SPENCE, Sidney, Ohio, Aug. 31, 1882.
I like it better than any offered by dealers.
Baltimore, Md., Jan. 24, 1882. C. H. LAKE.
It is the nicest I have used. D. KEYES.
Louisville, Ky., June 20, 1882.
It is the best I ever saw. GEO. WUSTUM.
Racine, Wis., July 19, 1882.
Willing to pay 2 cts. per lb. more than for any I have seen. F. WILCOX, Mauston, Wis., Mar. 23, 1882.
The most perfect article that I have seen.
Christianburg, Ky. G. W. DEMAREE.
Very well satisfied. Bees worked on it finely.
Avon, St. Genevieve Co., Mo. WM. BLOOM:
Have used about 75 lbs. from ——, but I prefer yours. REV. W. BALLANTINE, Sago, Ohio.
Your foundation is the best. J. W. PORTER.
Charlottesville, Va., March 25, 1882.
The nicest I ever received. H. W. FUNK.
Bloomington, Ill.
Your fdn. beats them all. Bees draw it out faster. JOS. CROWDEN, Remington, Ind.
Ahead of any fdn. maker of the world.
Borodino. N. Y. G. M. DOOLITTLE.
I concluded to send to you, even if express is higher. Council Grove, Kan. D. T. NORTON.
I never saw any nicer. G. TISDALE.
Westfield, N. Y., March 31, 1882.
Better than any I have ever had. J. B. MASON.
Mechanic's Falls, Me.
Well pleased with the foundation.
Council Bend, Ark. GEO. B. PETERS.

We are working on a new set of machinery made expressly for us. But, friends, remember that, to fill all the orders, we need wax; and if you have some, please write us. We will pay a high price for it. Send for our retail or wholesale circular, with samples free. We sell also colonies, queens, and supplies. **CHAS. DADANT & SON,**
2tfd HAMILTON, HANCOCK CO., ILL.

HEADQUARTERS FOR

Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular, containing directions for introducing queens, remarks on the new races of Bees, &c. Address
1tfd DR. J. P. H. BROWN, Augusta, Ga.

For Sale. Colonies and Nuclei of Italian Bees, Queens, Extractors, Bee Books, and Supplies. Address OTTO KLEINOW,
3tfd opposite Fort Wayne, Detroit, Mich.

FOR SALE!

QUEENS, BEES, COLONIES, COMB FOUNDATION, BROOD AND BROAD FRAMES, HIVES, SHIPPING-CRATES, HONEY-EXTRACTORS, HONEY-KNIVES, BINGHAM SMOKERS, PRIZE HONEY-BOXES, AND
EVERY THING A LIVE BEE-KEEPER NEEDS.
Send me an order and I will please you, I know.
F. A. SALISBURY, 3tfd
GEDDES, ONONDAGA CO., NEW YORK.

ITALIAN BEES, TESTED AND UNTESTED. QUEENS, SILK-WORM EGGS, ETC., ETC.,
NOW READY AT *REDUCED* PRICES.
Circulars on application.
3tfd CHAS. R. MITCHELL, Hawkinsville, Ga.

Stanley's Vandervort Foundation,
PURE ITALIAN NUCLEI,
AND ALL SUPPLIES NEEDED IN THE APIARY.

We are now prepared to furnish a large amount of our celebrated foundation, immediately on receipt of orders. This foundation is all made from choice yellow wax, and the workmanship is very fine, so that we feel sure that our goods will give perfect satisfaction. We are also agents for all kinds of Bee-Keepers' goods, and can furnish them as low as factory prices, and in some cases even lower. We sell the U. S. Standard Honey-Extractor at 10 per cent off the list price to all our customers who buy other goods of us. In addition to the above we have made arrangements so that we can furnish a large number of pure Italian Nuclei at greatly reduced rates. We will sell them with tested or untested queens, or without queens, as parties may wish. Those who wish to start an apiary the coming season should write and tell just what they want, and get our prices. Our nuclei will be built on full-sized L. frames, and will be well stocked with brood and bees. In fact, we shall make the nucleus trade a business, and will give you a good trade in that class of goods. Heavy fdn., 50c per lb.; light fdn., 60c per lb. Five cents per lb. advance after April 15th; 1c discount on fdn. when ordered in 25-lb. boxes. Address 3tfd

G. W. STANLEY & BRO., WYOMING, N. Y.

Why not BUY YOUR QUEENS and BEES DIRECT FROM The Breeder?

25 cents saved is 25 cents made. If you wish to purchase Italian Bees or Queens early in the spring, and wish a bargain, you should send for my new Price List. Queens ready in April.

3-5d Address **W. S. CAUTHEN**, PLEASANT HILL, LANCASTER CO., S. C.

HIVES! CHEAP! CHEAP! HIVES!

Having put in new machinery, and running exclusively on Hives and Supplies, I can give satisfaction on all orders on shortest notice. Send for price list and circular of Supplies for the apiary.

3tfd **A. D. BENHAM, Olivet, Eaton Co., Mich.**

SOMETHING NEW, NOVEL, RARE, BEAUTIFUL, AND USEFUL.

PARLOR ORNAMENTS MADE OF MICA. Wall-pockets, vases, baskets, brackets, horse-shoes, crosses, picture-frames, letter, glove, and handkerchief boxes; comb, card, and watch cases, etc., etc. For sale at *low prices*. Send stamp for price list to the *only* manufacturer, Miss Lulu Rogers, Cullohwee, Jackson Co., N. C. Will also furnish a cheap grade of *mica* for honey-boxes or observatory-hives. 4-6d

J. H. WOODWORTH & CO.,

MANUFACTURERS OF

SIMPLICITY BEE-HIVES,

AND DEALERS IN

BEE-KEEPERS' SUPPLIES.

SEND FOR PRICE LIST. 4 6d

WEST WILLIAMSFIELD, - - - ASHTABULA CO., - - - - OHIO.

HEADQUARTERS IN THE WEST FOR CYPRIAN AND ITALIAN QUEENS.

Tested Cyprian queens from imported mother (Jones's importation), in April, $5.00; in May, $4.00; in June and after, $3.00. Warranted Cyprian queens, in May, $2.00; in June and after, $1.50. Italian queens from imported mother (Root's importation), after 15th May, $1.00. I have had experience in breeding queens, and guarantee satisfaction. Order now, and pay when you want queens.

4d Address **W. McKAY DOUGAN, M. D., Seneca, Newton Co., Mo.**

HEDDON'S CIRCULAR now READY

Address JAMES HEDDON, - Dowagiac, Mich.

BEE-KEEPERS, ATTENTION!

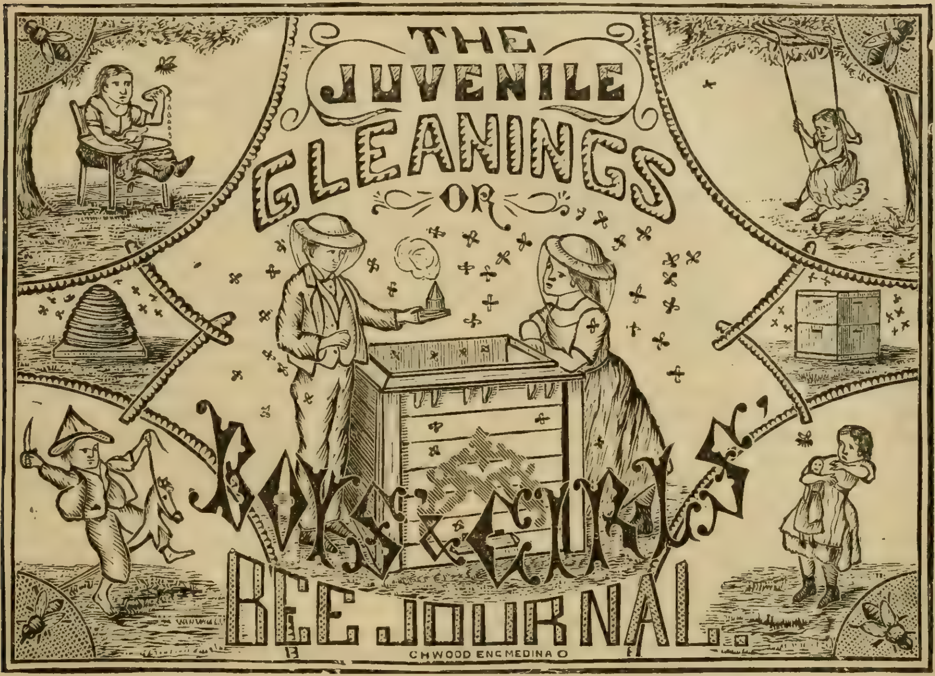
SIMPLICITY and CHAFF HIVES, SECTIONS, SMOKERS, ETC., ETC.

I guarantee satisfaction every time, or money refunded. QUEENS A SPECIALTY. Send for Circular and price list. 3tfd **HOWARD NICHOLAS, Etters, York Co., Pa.**

BEES BY THE POUND.

From April 20 to May 20. $1.00 per pound. After May 20 80c. Three-frame nuclei and whole colonies for sale. Send for prices. Foundation, made on a 10-inch Root mill, same price as A. I. Root gives from month to month. 3-5d **G. W. GATES, Bartlett, Shelby Co., Tenn.**

GLEANINGS IN BEE CULTURE EXTRA.



He that is faithful in that which is least, is faithful also in much.—LUKE 16: 10.

PUBLISHED BY A. I. ROOT, MEDINA, OHIO.

Vol. II. APR., 1883. No. 1.

MYSELF AND MY NEIGHBORS.

Ye are of more value than many sparrows.—LUKE 12:7.

ANOTHER month has just passed, little friends, and I have more neighbors than I had a month ago. One new one sits right here by my side. I am using a type-writer no longer, but simply talking to her while she makes funny crooked marks as I talk. It is rather new to me yet, and I find it a little hard to talk to you without my old type-writer; but it is so much easier that I am beginning to enjoy it very much.

Now, while we are talking about talking and writing, it occurs to me that we have one neighbor down in the tin-shop who can't speak a word of English. He came to me a few days ago with a friend of his, who could talk for him, and wanted work. I asked him how he could work when we couldn't talk to him. He said he guessed he could do it all right, if we would let him try. I told I would try to find something for him to do before long. It was but a few days before "Ned," who is the "boss tinner," you know, told me they wanted somebody to make little honey-pails, because you are ordering them faster than the hands we have there could make them. I thanked God for that, because I remembered at once our German brother, and thought we could give him work. I soon learned, however, that he used tobacco, and you know we don't hire anybody here who uses it. I sent word to him that if he could give up tobacco I could give him work. He said he would, and he has been busy at his tins for a number of days past. Nobody can talk with him except Jacob and one other boy; and as Jacob goes to school, he seems to be truly a stranger in a strange land. When I go along through the room, all I can do is to put my hand on his shoulder, and say "Good-morning," and he says "Good-morning" back again; but that is all the talk we have. His friend asked him how he liked it here, and he said pretty well, only he got pretty lonesome, with nobody to talk to. Are you not sorry for him, children? He just works away all day, and is probably having hard work to break off the habit so common in his country — tobacco-using. And there he sits all day long, with scarcely a word from anybody. Now, little friends, do you know how many times it is in our power to make life pleasant to those who are lonely or discouraged? The dear Savior has told us that kind offices such as those are accepted by him as though done unto himself.

Our whole building is now very full of boys and girls. We are so much crowded that we are almost constantly getting into each other's way. And yet a kind Christian spirit seems to be with all. Quite a number among the new comers are breaking off from the use of tobacco. I know, too, they are having a pretty hard time of it from what they say. Are you not sorry for them? I often wish that I could bear a part of it. Just think of it, boys; all this would have been saved had they not learned to use it when young. I wonder if it is possible that any boys who are reading these pages are thinking of learning to use tobacco. I asked a boy a few days ago why it was that boys ever wanted to learn to use it at all. He said it was just because they wanted to put on style, and look as though they were big men. *We* don't want to put on style, do we? but we want to be just what we should be, — good honest children; and when we grow up we want to be the same,— good, honest men and women.

For promotion cometh neither from the east nor from the west, nor from the south. But God is the judge.—Ps. 75: 6, 7.

We are now waiting for the frost to get out of the ground, to start that new factory I have been telling you about. I am feeling somewhat worried about the amount of money it is going to cost, especially if we have all the nice things in it that we have been talking about. Eliza is to have a counter store with room enough so she can have shelves for all her tinware, etc. Then she is to have a place in a large roomy basement below for all her bulky goods. In the room above her will be the clerks' office, where the goods are put up and mailed to you. The girls in the clerks' office are asking to have their room carpeted, and we also talk of having a room which we are going to call the sanitarium. You see, there are almost enough of us here to make a small village, and all the rooms are so full of buzzing people or buzzing machinery, and oftentimes both, it is a rather bad place for one who has a headache, or is sick. Well, in this room we wish to have a comfortable lounge, easy-chairs, plenty of air, water, courtplaster, bandages and lint, for accidents, and light, and every thing comfortable for those who are sick or hurt, where they may be cared for until they can go home, if need be. We talked about having a doctor too, but finally decided some of our nice careful women-folks would be almost as good as a doctor. Besides this room, we are going to have three fire-proof rooms, one above the other. In the lowest one will be all of the standing type for the A B C book. The one on the first floor will open right into the counter store for the Waterbury watches, plated ware, and our most valuable goods. In the one above, opening into the clerks' office, will be a place for our subscription list, ledgers, and all valuable books, letters, and papers. You see, children, if our building should ever get on fire, and burn up, we want to be able to send you the JUVENILE right along, and also have as little delay as possible. There, I think this letter is long enough for to-day. When you come to see us, you can see all these things. By the way, we are going to enlarge our lunch-room, and put in many conveniences for visitors as well as our own people here, and may be we shall think of the little boys, and girls too, that sometimes come with their papas when they come to make us a visit. Don't you think we ought to do so?

VIRGIL'S TREATISE ON BEES.

CONTINUED.

YOU remember that in last month's section two swarms of bees had been having a terrible fight; and we were counseled to put a stop to it by throwing dust over them. Now we are directed what to do next.

SELECTION OF QUEENS.

Truly when both contending leaders brave
From battle's bloody edge you chance to save,
Give him who looks inferior to be slain,
Lest by the prodigal, strife rise again: (1)
See that the nobler reigns in peace alone,
With emptied hall and uncontested throne. (2)

DIFFERENT KINDS OF QUEENS.

Shining with colored segments dipped in gold
May be the better of those leaders bold;
Indeed, two different kinds there are of bees,
Of which the preferable sort are these:
Distinguished, as their bearing one may view,
And brilliant with their scales of orange hue. (3)
Unkempt with idleness the others show,
Dragging their broad, vile bellies as they go. (4)

DIFFERENT KINDS OF WORKERS.

And as the styles of kings two forms embrace,
So are the bodies of the common race;
Some bristle in their coats of dusty gray,
As when a traveler plods his weary way,
Quite covered o'er with siftings from on high,
Earth he spits forth from mouth so parched and dry; (5)
Gleaming with gold the others flash and shine,
Their bodies marked in true and equal line.
This is the better race; betimes from these
Press the delightsome honey — yea, with ease
It doth surpass the cruel taste of wine;
Wine 's not so sweet, so liquid pure, so fine. (6)

PREVENTING DESERTION.

But when the fickle swarm would fly away,
Despise their hives, and in the blue sky play,
Leaving their dwelling desolate and cold,
Do you their minds from empty nonsense hold.
It is not hard to do; from off the kings,
With no great labor, just remove the wings. (7)
Not one, while they forbear the airy tramp,
Will dare to move the standards and decamp.
Gardens that breathe with saffron flowers invite,
And help restrain them from untimely flight.
Likewise a scarecrow for the thieves and birds
The hive with some protection cheaply girds —
Priapus, on the Hellespont adored,
Armed with a sickle made of willow board. (8)

MORE ABOUT PLANTING.

Let him himself, to whom such things are care,
Young pines adown the lofty mountains bear, (9)
And thyme to freely plant around the stands;
And with hard labor let him wear his hands, (10)
And fix the plants in earth, for fruitful bowers,
And spread the friendly artificial showers.

(1) By this we are let into a branch of apiculture which we are very slow to admit that the ancients knew any thing about; namely, improving their bees by destroying the poorer queens and saving the best.

(2) Our grandfathers did not know even this much, that only one queen could be tolerated in a hive. The family arrangements of the man in the moon were about as well known to them as the constitution and laws of the bees.

(3) Here is a delicate and interesting point. What color is the "rutilis" which Virgil applies to the segments of his chosen queen? In its use elsewhere the word is applied to the morning, to fire, to blood, to gold, and to the hair of the early Germans. My lexicon says, "Red, inclining to golden yellow," which is probably not far from the truth. We may conclude, then, that extremely light-colored queens were not well known to the ancients. On the other hand, the very dark, garnet-colored ones would hardly have met the poet's approval. As to the distinguished bearing and air of a nice Italian queen, every one who "knows bees," and who has an eye for the beautiful, can confirm that statement.

(4) If you would solve a first-class puzzle, just tell us what kind of a queen is this rejected one which we are advised to kill off. Some of the melipona and trigona queens have enormously broad abdomens, and drag them as they go; but these races live in Asia and South America, not in Italy. My own opinion is, that the early navigators brought *two* foreign races of bees to Italy, one of which remains as the well-known Italian bee; while the other, a race with inflated queens, from Asia or Africa, has since become extinct.

(5) If this describes the workers of the well-known German race, Virgil overdoes his business in the comparison (and as the most discreet of all the ancient poets he is not likely to do that;) I prefer, therefore, to follow out the supposition made above, and to suppose that those ill-looking, broad-abdomened queens had a worker progeny much more hairy and dusty looking than the Germans.

(6) Virgil was not a teetotaler; but he was generous enough to admit that wine was a cruel luxury, and that honey was superior to it.

(7) Now, doesn't that beat you? Here is an author writing before the Christian era, who coolly sets forth the method of retaining swarms by clipping the queen's wings — one of the very "crinkliest" of modern wrinkles; it looks as though we had better leave off saying, "the mysteries of modern bee-keeping," and say, instead, the ancient mysteries of bee-keeping.

(8) Here the door is set ajar for us to peep into an entirely different world from the one we live in. There were idols almost everywhere in Virgil's time. The most disreputable of the whole hideous lot was named Priapus; and so it came to pass, as we see, that Priapus had to do service in the gardens as a scarecrow — the most sensible use he could be put to, I think.

(9) I never realized until at work on this translation that pines were valuable for bees; but I presume Virgil is right about it. I think, however, that it is usually for pollen rather than for honey that pines are useful. They may at times harbor aphides that secrete insect honey. The only insect honey I ever caught my bees gathering was on a fir-tree. My location furnishes plenty of pollen at all seasons when bees can fly; so I don't have to climb the lofty mountains of Lucas county, and blister my hands, and wilt my paper collar, and all that sort of thing, to get pines for my bees. You needn't laugh; we do have some sand-ridges in Lucas county that rise away up — three or four feet.

(10) The boys who want to be clerks in a dry-goods store may read this. Virgil was somewhat an invalid, and the pet of a whole nation, and the intimate friend of an emperor; and yet he realized, probably from experience, how good it was to get out into the open air, and work with his hands until the calloused spots began to come. E. E. HASTY.

Richards, O., Apr. 2, 1883.

My dear friend Hasty, if you keep on at this rate, I shall really have serious fears that we modern bee-keepers will lose a great part, if not all, of our laurels. Clipping queens' wings is no new thing; forest-leaves for covering is no new thing; yellow bees are not new, and selecting best queens was also in practice in ancient times. Speaking of those sand-ridges reminds me vividly of the time when I was only about 18 years old, when I traveled over quite a part of Lucas county, as a juvenile lecturer on electricity. Those curious sand-ridges were a wonder to me as I passed them in trudging from town to town, to put up my show-bills for the entertainment of the coming evening. How I should love to see them now! I wonder if I shall ever get out to see you. Can't you tell us children something more about the sand-ridges?

LETTER FROM A 7-YEAR-OLD BEE-MAN.

HOW TO OPEN A SWARM OF BEES AND NOT GET STUNG; ALSO HOW TO CLIP A QUEEN AND NOT CRUSH HER.

I AM pa's bee-man, although I am but 7 years old. I can't write myself, so I am to give pa a box of honey to write this letter for me. Pa and I have 23 swarms of bees, all pure Italians. He says, "Harry, open No. 14; I am almost done with this swarm."

Now, I want to tell the boys and girls who read the JUVENILE, how I do it. I take the smoker, go to the hive, and puff whiffs of smoke into the entrance, and wait a few minutes for the bees to fill themselves with honey. The honey makes them gentle. I now take off the outside shell (we use the Quinby), raise the mat, and give them a whiff or two of smoke on top of the frames, to drive them down on the combs. Sometimes some of them are stubborn, and turn their backs up, and run their stings out to frighten me; I then give them a good dose of the smoker, and it's just fun to see them "scoot." I now remove one of the panels, and lay it on the alighting-board, and, "Pa, No. 14 is ready."

And now to clip the queen. Pa lifts the frames up; he looks on one side, I on the other. I can almost always find the queen first, for pa wears "specs," and I don't. When found, I pick her off the combs by the *wings* with my right thumb and finger; now set her fore feet on the ball of my left fore-finger, and shut my thumb on top of *both* feet, and I have her secure—no twisting nor squirming around. Now with my freed right hand I pick up the scissors, and if she commences buzzing her wings, gently lay the scissors on top of them for a moment, and she is quiet. "Now," says pa, "clip them close to her body," for one long naked thing among so many wings is more easily found; and besides, pa says that the queens that are clipped closely will run out no further than the alighting-board when they swarm, and, after buzzing her short stubs of wings a few minutes, and finding she can't raise, she quietly walks back into the hive; while the queen with one wing clipped will often partly raise and keep hopping along from one high point to another, until she is lost in the grass and weeds.

There, I must stop or I shall get this letter so long that I fear you will not print it. I should like to tell the girls and boys about my chickens and turkeys, and how I made $9.75 last summer; but I shall have to wait until next time. HARRY E. MARCH, per pa.

Fidalgo, Whatcom Co., Wash. Ter.

Very good indeed, friend Harry. I doubt if any of the older ones could have told how to open a hive better than you have done. You must be a very great help to your pa, if you are with him all the time he works among the bees. I presume these bees you are talking about are some that flew away across the water so far. Now, in regard to cutting the wings all off close to the queen's body, that is a little different from the way we have been doing. Will you not ask your pa if he is sure the bees are no more apt to supersede such a queen? The reasons he gives are new to me, but he may be right about it. Friend Harry, we credit you $1.00 for your very valuable letter, and I am quite sure the boys and girls will be very glad to hear about your chickens and turkeys.

APRIL SHOWERS, BEES, ETC.

THIS month reminds us of the old saying, that "March winds and April showers bring forth May flowers;" and soon the time will come when, if we have nothing else to do, we can notice the changes our bees go through before they begin housekeeping. First, we see the egg; then the larva, or worm, is fed by the bees. Now the question for some of you to answer is, What do they eat at this stage? After a certain time the larva is sealed up in its cell; and when it comes forth it has wings with which to fly, and it seems to know how to use them too. Yet some persons will tell you not to believe that we can ever change or become more beautiful than we are. Why, we ought to grow more beautiful every day! and more useful too. Do you think that our transformation will be any more wonderful than for the larva of the bee to become the beautiful little insect it is?

While there are so many beautiful things created for our benefit we should not make ourselves unlovely, but keep our bodies clean, improve our minds, and not forget that our souls must some day return to God.

It has been said, that "the greatest benefit can be conferred on a city, not by raising the roofs of its dwellings, but by exalting the souls of its citizens; for it is better that great souls should live in small habitations, than that abject slaves should burrow in great houses." E. M.

SAMMY AND HIS BEES THAT HE FOUND ON A STUMP.

WHAT WAS THE REASON THEY WOULD NOT RAISE A QUEEN?

I WENT one evening, the first week in July, to the pasture to drive the cows for my ma, and found a swarm of black bees on a stump about three feet high. My pa had never kept bees at that time, and had no hives. I went to one of our neighbors and borrowed one old box hive, and pa put the bees in that evening; but when I went in the morning to look at them they were all on the stump again. Pa put them into the hive again; but next morning they were back on the stump. Then pa went and got a bee-man to come and hive them. He brought a hive and a frame of bee-brood and put the bees in, and they stayed. We brought them to the yard, and they worked well for three weeks. Then they did not work. Pa looked at them, but could find no queen nor young brood. He bought a hive with a strong colony of Italian bees, and put a frame full of young brood in with my wild bees. Pa said if they had no queen they would raise one. We looked at them in three or four days, and they had made two queen-cells. Pa thought they would be all right, but they were not. When the brood hatched out that pa put in, they had no more larvæ, and nearly all the bees are Italians now. After a few days he cut a large queen-cell from an Italian colony, and said for certain they would have a queen now. They took care of the queen-cell, and in five days pa looked, and the queen had hatched out. But we could not see her. In about two weeks they had a patch of drone-brood as large as my hand, but never any more.

But we could not find the queen. The last of September pa sent and got a dollar Italian queen, and put her into the hive. She was a beauty, and the bees were glad to see her. Pa fed them 10 lbs. of white sugar in syrup; and when he put them away for winter the first of November they had a young queen, bees, eggs, and larvæ. Pa put all his hives in boxes with chaff at the back, top, and both ends, and left the front open.

Oh, dear! I am so tired of writing; but no swarm of bees ever had such a story to tell before, as my stump hive. SAMMY A. WOODRUFF, age 9.

Greencastle, Putnam Co., Ind.

You did have trouble, Sammy, it is true; but I think they might have been managed a little better, if you will excuse me. I am inclined to think that their queen was left on the stump, and that is why they went out of the hive, and went back again. Had you put a comb of brood in with them, when they were first hived, they would have raised a queen in a very little time. It is to avoid just such mishaps that I have so strongly advised always giving every new swarm a queen. Again, when the new swarm has been some time queenless, a laying queen is much the safest way. The colony should be then watched; and if she doesn't lay, give them another. We hope to hear that they wintered nicely.

BIRTHS.

TWO of our office girls, "Bess" and "Stella," left us a while ago, as you may remember. Well, another of the office girls has given us the following bit of news: —

March 10, 1883, a son to Mr. Will and Mrs. Stella Lyons, St. Johns, Mich.

March 24, 1883, a daughter to Mr. Robert and Mrs. Bess Zimmerman, Washington, D. C.

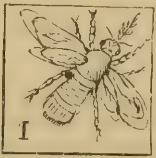
Babies, "star" and "bee,"
Of whom we hear with glee,
We greet thee!
For thy mammas' sake,
"Office pets" we'll make
And keep thee.

Well, well! I suppose next there will be a couple of juvenile letters from these two chicks, to let us know that they *too* are growing up and "taking notes" of what is passing in this world of ours.

THE COMING BEE.

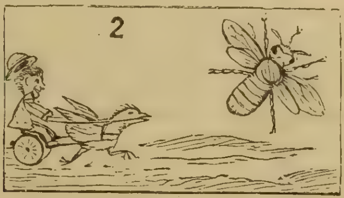
ILLUSTRATED WITH PICTURES.

I SUPPOSE, children, you have all heard the talk about a honey-bee that will gather ever so much honey, will never sting, or hardly ever, and that would increase so wonderfully that a single colony might increase to one hundred (or *less*) in a single season. Well, the idea is, that we get this improved bee by careful selection, in the same way that fruit-men give us the improved fruits, and flower-men our wonderful varieties of flowers. You see, the way it is to be done is by careful selection and careful breeding—of course, going all over the world, as our friend D. A. Jones did, to get the best bees that could be found to start with. Well, our good friend W. P. Henderson, Murfreesboro, Tenn., has sent us the following pictures to illustrate it:—



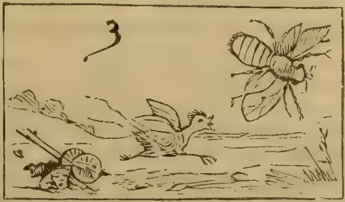
THE COMING BEE.

Figure 1 shows you the coming bee with his wings spread, all ready to fly away to the flowers. See what a great long tongue he has, to reach down into the red clover, or away down into the deep honeysuckle, the way the hummingbirds do.



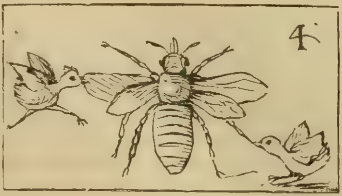
AFTER THE COMING BEE.

Here is a man chasing the coming bee. You see he is so eager in the chase, that the wind is blowing his hat off.



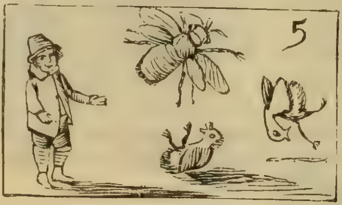
NEARER THE COMING BEE.

In No. 3 we see he has almost caught up with the coming bee; but, alas! his gig has broken down, and there he goes, tumbling in the dust.



WE HAVE THE COMING BEE.

In No. 4, the coming bee seems to have been caught, or at least they think they have caught him. But just as they feel so sure, away he goes again.



I ARISE TO INQUIRE, WHO HAS THE COMING BEE?

But now friend Doolittle's "old man" rises up and says, "I arise to inquire, Who has caught the coming bee?"

BEE-KEEPING, BY ONE OF THE JUVENILES.

TO KEEP SWARMS FROM GOING OFF; HONEY THAT WON'T CANDY.

IN the fall, pa put 30 swarms of bees and 7 three and four frame nuclei in the cellar; but it was so damp, from fixing it so late in the fall, that some of them died. He has 25 left, and some of them are pretty weak yet; but he has lots of honey left from those that died, so that he can feed them. He has three swarms in chaff hives, and those he wintered out of doors, and they wintered nicely. Pa never lost a swarm of bees in swarming-time. When a swarm of bees comes out he gets a frame of uncapped brood and puts it into the hive, and then puts the swarm in it; they will not leave the brood and go off. Pa made his own smoker, and makes them to sell too. He makes the springs of coiled wire, and he thinks they are the best. He has his bees all Italianized now. He sold a few queens last summer. When he sold a queen the bees would make lots of cells, and pa would leave them in until it is almost time for one of them to hatch, and then he would cut them all out but one. Those he cut out he introduced into a hive that had no queen. Pa is making a new buzz-saw, and he has sent to you for the saws. Can you tell me why our honey does not candy? You can leave it open, or you may can it up, and it will not candy. Pa had a box full sitting open all winter, and it did not candy. I think Mrs. Harrison's bees must be awful cross, or she must be afraid of them. My pa and ma go right out among them with their sleeves rolled up, and they do not sting them. JANE E. STONER.

Merrimac, Wis., March 17, 1883.

A very good letter, friend Jane. You have given us some quite important facts, and we are very glad to know that you are so much interested in your father's work as to know all that he is doing, and how he does it. I can't tell why your honey does not candy, unless it is because it is collected from some plant that produces honey that won't candy. If you knew what the plant was, it might be worth while to place it among our honey-plants for cultivation. I agree with you about gloves and veils. When I am working with the bees I never want any such things bothering me.

JUVENILE DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

> "A chiel's amang ye takin' notes,
> An faith, I'll prent it."

HERE I am, little friends, before your great pile of letters again. There are so many of them that I have been obliged to decide to use for print only the best. Therefore, much as I should like to let you see your letters in print, I presume a great part of them will have to be passed by. If you feel disappointed at this, the only remedy I see is to hunt up some valuable fact, so that I can not very well pass yours. Remember that your letters are all carefully read, even if they are not put in print, and "Be not weary in well doing." Who can tell me where I can find that in the Bible, and also what is the rest of it? There, I shall now give the rest of the room to you.

I don't like bees very well, for one stung me on the eye last Sunday. **MARIA B. MOON, age 7.**
Youngstown, N. Y., March 22, 1883.

My uncle gave me ten cents a hundred for nailing section boxes. I like to help him work with the bees. **HARRY MORRISON.**
St. Clair, Mich.

I will write you a letter and tell you what I can do. I carry in the wood, cobs, and gather the eggs. I can pump water and carry it into the house. I shall be six years old the 9th of next July.
Creston, Iowa, March 24, 1883. **W. A. SADLER.**

138 LBS. COMB HONEY FROM ONE COLONY, ETC.

We had a good deal of honey last year. The highest amount from one hive was 138 lbs. of comb honey. Pa has a Novice extractor, but the honey was so granulated that it would not extract. He is fixing to raise some queens. Our bees are mostly Italians. **NETTIE BRYAN, age 12.**
Rome, Floyd Co., Ga., March 23, 1883.

My pa has his bees in a building, packed with dry leaves, and they are doing finely. He set them out the other day for a fly. Oh! but they had a gay time just as we children do when school is out. **STELLA SHOUP, age 9.**
Coloma, Berrien Co., Mich., March 26, 1883.

HOW FANNIE'S FATHER WATERS THE BEES.

Pa keeps part of his bees in the cellar, and gives them water by dipping a rag in water and laying it at the mouth of the hive. The bees seem anxious for it. **FANNIE BORTON.**
Flint, Gen. Co., Michigan, March, 1883.

100 LBS. FROM A ONE-HIVE APIARY.

I am a little girl. I live with my uncle and aunt. I have over two miles to go to school, but it is closed now. We have one stand of bees; they made 100 lbs. of honey last summer. **MAY POLLARD.**
Moscow, Liv. Co., N. Y., March 4, 1883.

FROM 23 TO 62, AND 3500 LBS. OF HONEY.

My brother got 3500 lbs. of honey this summer, from 23 swarms in the spring; he increased to 62. I stayed home from school about a month and a half this summer to watch his bees, and he gave me $5.00. **EMMA WAGNER.**
Calamus, Clinton Co., Iowa.

Papa has about 30 swarms of bees. He gives me 25 cents for every swarm I see first in swarming-time. I live on a farm, but I am spending the winter in the city. I think the best honey is made from white clover. I am a Canadian girl. **EMILY K. WESTOVER, age 10.**
Frelighsburg, Quebec, Can., March 24, 1883.

BEES WITHOUT "END."

Last spring my pa had 7 swarms of bees, and by fall they increased to 42; sold two swarms to my grandpa, and it is fun to see him work with them. One day I was at his house when he was working with them, and they came out so fast that grandma said there was "no end to them;" but grandpa "allowed" they had an "*end*," when they commenced to sting him. **FRANK CRAIG, age 11.**

LEFT-HANDED MAUD.

My brother Frank is writing to you, and I wanted to write, so ma said she would help me spell the words. My pa makes his own frames, and I help him tack them. He says I am "awful good at it," even if I am left-handed. **MAUD CRAIG, age 9.**
Tiffin, Iowa, March 26, 1883.

Glad to hear it, "left-handed Maud."

"BUTCHERING" BEES.

Pa and my brother have 80 swarms of bees. We get our foundation of you. A neighbor came to visit us one day, and he said he was going to "butcher" 3 swarms that evening for their honey. Pa asked him whether he might have the bees if he would take them off the comb. He said he could, and they are now in our hives, with plenty of honey for winter. **EDWARD S. ROE, age 11.**
Jordan, Jay Co., Ind.

I am very glad, Edward, that your pa was humane enough to take the part of the bees, and I hope he will do well with them.

My father has ten swarms of bees. They did not swarm at all last summer. One summer a swarm came out and alighted on one of our little trees. Father was gone, so mother and I hived it.

MARY E. GOULD, age 10.

Lisbon, Androscoggin Co., Maine.

THE YOUNG FARMER.

I will write you a letter, and let you know what I can do. I can do up all of the chores when papa is away from home. I harrowed in wheat last week for the first time. I will be ten years old the 13th day of next June.

CHARLES F. SADLER.

Creston, Union Co., Iowa, March 24, 1883.

Very good, Charley.

THE BOY WHO IS GOING TO MAKE A STEAM-ENGINE.

Inclosed please find one dollar to pay for your soldering outfit. I am going to make me a steam-engine, and I want the outfit to use for it. Ma lent me the dollar, but she says I must solder for the neighbors, and pay her back.

GEO. R. PHILP.

Your ma is right, George. Pay for your tools as you go, and make your work self-sustaining.

HOW ALBERT SWARMED THE BEES, AND GOT INTO TROUBLE.

Mrs. Hall has been reading the JUVENILE. Mr. Hall has 45 swarms. My business in swarming-time is to blow the horn. I tried to hive a swarm once, and they got down my pants legs, so I let them go, and called Mr. Hall. Two swarms went off to the woods. He has ready sale for all of his honey at 20 and 25 cents.

ALBERT S. WOODVILLE.

Northfield, Minn., Nov. 27, 1882.

A CAUTION ABOUT EXTRACTING TOO LATE.

My father keeps bees. He extracted the honey all out of the upper story, supposing that they had made honey in the lower to live on; but he found that some of them had nothing but bee-bread and drone-comb in the lower story. Another bee-keeper near here had some weak swarms, and pa gave him some bees to strengthen them.

HARLAN E. GLAZIER, age 10.

Virgil, Cortland Co., N. Y.

FROM 5 TO 14, AND 18 GALLONS OF HONEY, ETC.

Pa had 5 hives of Italian bees last spring. They increased to 14, and all lived through the winter but two. He keeps them in chaff hives. Pa and ma extracted 18 gallons of honey, and had some comb honey left. Pa likes the extractor you sent him. I go to Sunday-school, and at the close of the quarter I could recite all the golden texts.

RALPH MCREYNOLDS, age 9.

Topeka, Mason Co., Illinois, March 22, 1883.

We have no bees at our house, but we have a sweet little baby. I help my ma wash dishes. I like to work. I go to see my aunt. They keep lots of bees. I help them look for the queen. They have an incubator they made out of what they hatch queens with, and we are going to try to hatch lots of little chickens at one time. Please print my letter. I want to surprise them. They take your book. I go to Sunday-school.

GETTY LAWSON, age 6.

Staunton, Clay Co., Ind., March 26, 1883.

To be sure, we will surprise them, Getty. I am real glad you told us about the incubator. Let us know how many chickens it hatches.

A LITTLE ORPHAN'S LETTER.

My father and mother are both dead, and I am living with my brother, and he has ten stands of bees. He sent off for some of your Simplicity hives, and I like to be about when the bees swarm; but I don't like to be stung. Bees are a strange kind of insect, but are very useful to make honey, which is nice to put on the table.

URIAH G. INGHRAM, age 13.

Waynesburg, Green Co., Pa., March 21, 1883.

I saw in the JUVENILE where the question is asked, "Where in the Bible does it say it is not good to eat much honey?" and you wanted to know how many of our little friends can tell where the passage quoted can be found. I can tell for one. It is Prov. 25:27. Also what two men in the Bible were refreshed by eating considerable honey. I can not find where it says there were two men thus refreshed, unless it was David and the men in the wilderness. I should like to have our little friends answer this question: What is sweeter to the mouth than honey?

LUCY CLARK.

Lenox, Macomb Co., Mich., Jan. 8, 1883.

A NINE-YEAR-OLD BOY'S STORY.

You sent mamma a copy of your journal and JUVENILE, and I saw the little folks' letters. I thought I would write one too, as I am a little boy. Papa has three hives of bees, and I like to see them work. Last summer there was one swarm that came off three times before we got it hived. It went back in the same hive twice. The second time it came off, but in about an hour after it went in the hive, there was a swarm of bees that came across the creek, and it went in with them too, and then in about a week they came off again, and papa and mamma hived them in another hive that time.

J. P. MCKARNEY.

Leesburg Station, Pa., March 29, 18 3.

THE FOURTH-OF-JULY BEES.

I wish I could come with my little birds to say good-morning to you. We all think you are a real nice man. My papa sent to you in June, 1881, for 2 three-frame nuclei. He has increased it from that to 11 nice swarms, besides taking 100 lbs. of honey.

Last 4th of July one swarm came out and alighted on a grapevine stake. My papa pulled up the stake and carried it to the hive. We called it our fourth-of-July banner. Our bees are republicans.

My papa raises a great deal of small fruit, and the blossoms are nice for the bees.

Ada, Mich. UNA LABARGE, age 8.

"HOT CORN," TO MAKE HENS LAY.

I have just been reading some of the juvenile letters, and some are very interesting; so I thought I would write and see if anybody would be interested in mine. We keep Italian bees and Leghorn hens, and get eggs every day. We warm the corn in the oven before giving it to them, which makes them lay much better. We live on a bank about forty yards from Long Point Bay. I go skating in winter, and swimming in summer. The steamer comes in twice a week. We have a boat in which we go fishing.

GEORGE MASON, age 8.

Port Rowan, Ont., Can., March 26, 1883.

I like hens too, George. We got 17 eggs yesterday, and a few days ago we sold a lot of roosters, and they brought about 40 cts. apiece. Don't you think we are doing pretty well?

REPORT FROM A TRAPPER.

Pa has 22 hives of Italian bees, and he got 600 lbs. of honey in 1882. He has islands in James River on which he traps. He has caught 276 musk-rats and 8 raccoons, and 3 otters. I have two sisters and four little brothers. **CORA F. STEGER**, age 13.

Paynes, Va., March 27, 1883.

SAWING BOARDS, AND MAKING SUGAR ALL AT ONCE.

My father has a saw-mill. He saws lots of logs; he saws from three to four thousand ft. a day. There are about 500 logs in the mill yard now, besides what he has sawed. We make molasses, and boil it by steam in the mill. **MARY BARNABY**, age 10.

Rootstown, Portage Co., Ohio, March 30, 1883.

There, Mary, that is just what I thought of doing—boiling our maple sap by steam power. The only trouble is, I did not know just how to do it. I wish I had time to make you a visit, and then, you see, I should know all about it.

BETWEEN THE MOUNTAINS.

We live between two mountains, about one mile apart. You will think that is a narrow valley; but it makes it up in length, nearly forty miles long. Our bees are working very strong now on sumac and white clover. Sumac is very plentiful, and it swarms with bees from dawn till dark. Are your section boxes made of basswood? Papa says it is what we call linden here. I do not know whether they are the same or not.

FIXING THE ENTRANCES.

Brother Lee and I took our hand-cart and went to the steam sawmill, half a mile, and hauled sawdust and banked up in front of our hives to make an alighting-place for the bees; they came so laden, that they would fall before they got to the alighting-board. **VICTORIA J. FIELDS.**

Valley Point, Pa., July 20, 1882.

Basswood and linden are the same, my little friend. I am glad to know you are fixing up the hives so nicely. Your letter came last summer and we have just got to it.

THE TWO "EARNEST" CHILDREN; FROM 5 TO 21, AND 50 LBS. OF HONEY.

Papa has got 21 stands of bees. He started with 5 in the spring; took off 50 lbs. of surplus honey, and increased to 21; he feeds them when it isn't too cold for them to fly. Sometimes mamma feeds them. I go to school all the time. **HATTIE EARNEST.**

Knightstown, Henry Co., Ind.

BERTIE'S LETTER JUST AS HE WROTE IT.

mR ROOTE pAPA HAS got 21
sTANdS O F BEES I AM A LITTLE
BoY FivE YEARS OLD iF YoU THink
THis LETTER IS WoRTH A Book
PLEASE SENd siLVER KEYS
BERTIE EARNEST
KNIGHTSTOWN HENRY Co. IND.

Well done, children; to be sure, you shall have your books.

WINNIE TELLS HOW HER FATHER MAKES FDN.

I am going to tell you how my father makes foundation. He buys the wax, and has to cleanse it; then he melts it again, and takes thin boards, about 18 inches long and 8 inches wide, with a bail on, and dips it into the hot wax two or three times; then dips it into cold water, which makes it come off. He piles it up in piles and puts it away until he wants to make fdn. of it. I have to help him make the fdn. He uses the press machine. I wet the dies for him with starch; after he makes fdn. of it he cuts it up to put in the boxes and frames. I think this is all. **WINNIE RIANS**, age 13.

York, Liv. Co., N. Y.

SARAH'S PA'S BEES.

My pa had two swarms of bees last summer. They did not swarm at all. Pa got a man to look at them, and he found they had made 25 or 30 lbs. of honey, outside of the frames. I do not know what kind of hives they were. I can cook, wash dishes, sweep, make beds, and do almost all kinds of housework. Our bees were blacks, and pa sold them in the fall. **SARAH HIGBEE**, age 10.

East Randolph, N. Y., March 16, 1883.

I suppose, Sarah, the bees made the honey in the cap to the hive, or in some vacant space. I should think, from your report, that your pa is not very much of a bee-man.

160 LBS. OF HONEY FROM 4 STANDS OF BEES.

Pa has 4 stands of bees, and he extracted 160 lbs. of honey from two of them. I thought the honey was very nice, and everybody who saw it wanted to buy some. Extracted honey is something new to everybody in our part of the country. Last summer when I was gathering flowers to make a bouquet I saw bees on a weed called carpenter's-square. I watched them awhile, and I could not imagine what they were doing; and when I went home I asked pa, and he said they were gathering honey from the flowers on the weed. **KATIE THOMPSON**, age 12.

LaFontaine, Ind., March 26, 1883.

Katie, your "carpenter's-square," as you call it, is our old friend the Simpson honey-plant that so much is said about in the A B C book and the bee journals. Its real name is figwort, I believe. I am glad to know that you are interested in seeing the bees work on it.

SYLVESTER, AND THE WAY HE HAS "FUN."

I have 6 brothers and sisters. We live about 3 miles from Montrose, in Ambrosia school district. We have 4 horses to tend to, and 13 hogs and 22 cattle. We have a good deal of fun on Sunday playing ball and marbles. In the summer we go swimming sometimes. I am going to a party the 10th. I was over to a party the other night, and had a good deal of fun. I have written all I can think of, and now I will close. The book I will take is Pilgrim's Progress. **SYLVESTER BOYD.**

Montrose, Iowa, March 5, 1883.

Why, Sylvester, do you mean to say that you play ball and marbles on Sunday? It seems to me our boys and girls of your age ought to go to meeting and Sunday-school. Don't you think so? If you read the little book we send you, "The Pilgrim's Progress," I think you will see what troubles Christian and his companion Hopeful had when they got just a little way out of the straight and narrow path. They got imprisoned in Doubting Castle, and had several troubles before they got out. Now, think of it, will you, and see if it doesn't seem to you that such games on Sunday are starting just a little in the wrong path?

A NEW HONEY-HOUSE, A BRANCH APIARY, ETC.

My pa has 50 swarms of bees, and he and my two eldest brothers made 40 new hives during the winter. Most of them are Langstroth hives. I like to watch him take honey from them. Pa built a new honey-house and lathed and plastered it. I have signed the pledge, and go to the Band of Hope every Saturday. I like to go. I also go to Sunday-school; I have a very good teacher. Pa has an apiary 7 miles from town. He says you will give a book to little boys and girls if they write. Would you please send me one? I am lame. JAMES FOOTER, age 10.

Cumberland, Alleghany Co., Md., March 23, 1883.

To be sure, we do, James, when they write a good letter like yours.

IS OLD FOUNDATION GOOD?

We received the supplies March 24th. Pa began last spring with two stands, and increased to five, and got about 150 lbs. of honey, mostly extracted. He never saw the inside of a hive with bees in it. We have our bees in the Champion hive, but are going to change to Simplicity this spring. Pa would like to know if foundation two or three years old is just as good as new. DWIGHT BIRCHARD.

College Springs, Iowa, Mar. 24, 1883.

This question has frequently come up lately, as to whether fdn. is just as good after it is several years old. We have often tested the matter, but have not been able to see much if any difference. Fdn. is frequently put into the frames, and a part of it left over until another season, without being drawn out. These frames, when given new swarms in the spring, seem to answer as well as any.

CHARLEY'S STORY OF THE BEES AND THE HIVES.

My pa has 23 stands of bees. We got lots of honey. We turned our horse into the yard to eat some grass, and he came close to a hive of bees, and got stung on his nose by a bee. He then ran so that we could hardly catch him. I tell you, he remembered it, and he never went close to a hive of bees again. I am going to school, and can read and spell tolerably well, but I can not write very well. Our teacher does not instruct us in writing, so I am very much deficient in it. I also go to Sunday-school.

CHARLES W. NELD, age 9.

High Hill, Mo., Mar. 20, 1883.

My little friend Charley, it is a very bad habit to fall into, of finding fault with your teacher. I presume that the teacher thinks that nine years is almost too early for a boy to commence to learn writing, and very likely he is right. Do as your teacher asks you, and study to obey his orders, and I shall have no fear but that you will become a good writer in time.

BEES AND STRAWBERRIES.

We have some bees. I like to work with them. The moths killed ten hives. We also have some strawberries — about two acres. We shall have lots of them this spring. My cousin wrote this letter for me. WADE MANNING, age 10.

Bartlett, Tenn., March 28, 1883.

I am afraid, Wade, that what you say about the moths killing ten hives is not quite orthodox. Do you know what orthodox means? I am afraid your bees were not properly cared for. We bee-folks think, nowadays, that the moths never kill bees directly. After they get down very weak from neglect, moths may sometimes do them some injury. Probably you pay more attention to the two acres of strawberries than you do to the hives of bees.

BERTHA'S LETTER ABOUT HER FATHER'S BEES.

My father has 130 swarms in the cellar, except 6 which he put outdoors Saturday. He has a handbarrow, with which he carries his bees out of the cellar. He and my brother Will were carrying some of them out of the cellar. They set one on top of the other, and they tipped them off. When Will saw them going he let go. Pa had quite a time to get them back. I have never helped much in the bee-yard, only to catch queens and drones; but pa said he would sell me a swarm and let me try to be a bee-keeper. He makes beeswax and foundation. He puts the comb into a boiler, with water; when it boils he sinks a little wire basket in it, and then he dips the wax out of the basket with a little dipper.

BERTHA BLANCHARD, age 11.

Ironton, Sauk Co., Wis., March 26, 1883.

Thank you, Bertha, for the idea about rendering wax. I suppose you mean your father puts his combs into a basket made of fine wire cloth, and when the water boils he sinks basket and all into the boiling water, and then dips off the wax as it rises to the top. I think your father and brother had better be careful how they set the hives down. It makes pretty bad work to let the hive tip over. You see I know, because I have tried to do it.

A NEW WAY OF TRANSFERRING; BY A JUVENILE.

I am an A B C scholar. I read it from the beginning to the end. I have one stand of Italian bees, which my pa gave me this winter. They are very strong; I am going to run them for comb honey this year. I am going to be a bee-keeper. Pa bought one box hive of bees last week at a public sale, for one dollar. We prepared a Simplicity hive by putting in three frames of comb and honey. We cut a hole in a board six inches square, and put it under as a bottom for the hive; we then turned the box hive upside down, and placed the Simplicity hive on top, and placed them in a spring wagon and started for home, a distance of three miles. When we got home, all of the bees were in the upper hive. What do you think of transferring bees in this way? Our bees wintered all right. We put sixteen in the cellar, and packed seven colonies on their summer stands in dry-goods boxes, six inches larger than the hives, with hay and straw between the hives and boxes, and about 8 inches above, and placed boards on top to drain the rain off. They are all in fine condition at present. Four weeks ago, on a fine warm day, we carried those in the cellar out to have a flight, and then carried them back again. They are all healthy. JOHN V. NEBEL, age 13.

High Hill, Missouri, Mar. 20, 1883.

Why, John, your trip of three miles answered the same purpose as drumming them out, which some of our old bee-keepers tell about. Your discovery in transferring, then, is this: Fix your new hives with combs or foundation, or both; then fasten it securely over your old box hive, turned bottom upward. Set it in the wagon, and drive three miles, when you will find the bees all out of the old hive, in the new one; then you can transfer the combs at your leisure.

A LETTER FROM "HONEYVILLE."

My pa and I have just come in from the bee-yard, examining the bees. A few were weak in honey, so we gave them more. This morning it was cool; but toward noon it began to get warm. This afternoon, when we examined the bees, what do you think we found? Well, we found young drones just hatched out. We found drones in only one colony, which had an imported Italian queen 5 years old, but she is now dead. My pa has 34 colonies of bees, and he has 66 more which he tends for the half. I had 2 colonies of bees last fall; but one has died, so I have one left, and that a pure Italian. There is a store not quite half a mile from here. It is named Honeyville, and it has the right name too, or I think so—don't you? There are nearly 90 people and children living in Honeyville. May be we shall get a post-office here, and then we don't need to go so far for the JUVENILE. Sometimes I can't hardly wait till it comes, so I can read the letters from the boys and girls. DANIEL J. MISHLER, age 13.

Ligonier, Ind., March 29, 1883.

THE WAY CHALCEDONY GOT THE PEACHES.

One little girl told me that bees made honey, and I thought so too; but pa says bees don't make honey. He says God makes the honey, and the bees gather it and carry it to their hives. Pa has a bee-yard, and there is one peach-tree in it. Last summer the tree had peaches on it, and I did not know how to get them, for I was afraid of the bees; but I will tell you how I got the peaches. I took a tin dipper and tied a long stick to the handle of it, and then held it under the peaches, and knocked the limb with another stick, and the peaches fell into the dipper; so I got them that way, and the bees did not sting me. I learned all I know, at home.

CHALCEDONY MANNING, age 10.

Bartlett, Tenn., March 22, 1883.

Your plan of getting the peaches was quite ingenious, my little friend. But is not your name, "Chalcedony," a little singular? How many of our little friends can tell us what "chalcedony" means?

FLORENCE AND THE BEES.

Pa has to feed his bees now. He puts white sugar in boiling water, and makes a syrup. He used to put the syrup in saucers, and made floats of wood full of holes to feed the bees. But now he has made feeders. Pa made his own smoker. He took round oyster-cans and made the fire-chamber, and for the bellows he took two pieces of wood the same size and tacked strips of leather to them. Uncle and pa have just bought some lumber to make new hives for next summer. Pa gave uncle a hive of bees last summer; he has two now. When he comes to see us he talks about nothing but bees. We laugh at him, and tell him that he has got the bee-fever badly. Pa was examining his bees last night, and found that one colony was half frozen to death. He brought them in the house, took the top off the hive, and warmed pieces of carpet and put over the top of them. This morning they were flying around the room. Pa has not taken them out of the house yet; but if he had left them out of doors they would have been dead. Pa set out a great many strawberry-plants, and some raspberry-sprouts. He had a basket full of strawberry-plants left, and gave them to me to make me a little strawberry-patch, so my little brother and I set them out. I will answer Hugh J. White's question, Where in the Bible does it say that John the Baptist ate locusts and wild honey? The third chapter and fourth verse of Matthew.

FLORENCE E. COOMBES.

Memphis, Ind., March 25, 1883.

HOW MANY EGGS DOES A QUEEN LAY? QUERY FROM A SCHOOLGIRL.

Can you tell me the number of eggs a queen will lay in her lifetime (of course, I mean the average queen), and oblige a schoolgirl? NELLIE ADAIR.

Oswego, N. Y., Jan. 13, 1883.

I can't tell, Nellie, but I can make a rough estimate. For instance, we will say a queen, although she *may* lay 300 eggs a day, lays, on an average, 1000; and although she may live to be three or four years old, we will estimate that she lives two years. In two years there would be about 730 days. Let us estimate that she would lay 1000 eggs per day for 500 days. This would be 500,000. Now, Nellie, suppose we prove it another way. A good ordinary queen will often send out, during her lifetime, as many as three good swarms in a season, and for two seasons; this would make six good swarms of bees. Now, we estimate a swarm to have about 40,000 bees. This would give 240,000; and as all the bees that are hatched do not go out in swarms, perhaps as many more are hatched. This would give something like our first result, 500,000 eggs, laid by a queen during her lifetime.

SUGAR-CANE THAT THE BEES WORK ON; REPORT BY A JUVENILE.

The other day father and I cleaned the seed of our orange cane (the kind the bees work on) with an old-fashioned flail, and father thinks it is the best way. He has been cutting your advertisement out of papers, and sending them with his Plymouth-Rock chicken circulars, and he says if you will print some of your advertisements on slips of paper he will send *them* with his circulars, and increase the circulation of GLEANINGS.

CHARLES E. ISRAEL.

Beallsville, Monroe Co., Jan. 8, 1883.

Thanks, Charley, for your report on sugar-cane. I shouldn't wonder if your father would have calls for all the seed he has to sell, from bee-men. I would suggest, that if he has any to spare that he furnish it at regular prices, 15 cts. per lb., and 18 cts. more where wanted by mail. Will you please write us another letter, and tell us how much sugar you get from it? We are very much obliged indeed to your father for sending out our advertisements. Tell him we will gladly send him as many price lists as he wishes, and then he can send them out when he sends goods.

LIZZIE AND HER UNCLE.

Uncle takes your paper, and he has a new A B C book. I believe he thinks as much of it as I do of my new scrap-book. When we have callers he will say, "See my new bee-book." Then I say, "See my new scrap-book."

Uncle commenced last spring with two hives of bees; and now from those two he has nine; besides, one of his first large swarms went off. We have had all the honey we wanted to eat, some to give away, and some left yet for winter. The bees did not finish some of the last boxes. They did not finish the cells, or cap it over. Uncle thinks it is because it was too cold for them to work the wax, as the comb in the middle of the box was finished, and not outside.

BLACK HONEY.

Can you tell us where the bees get the black honey they sometimes fill a cell with? Sometimes in the white comb we find a few cells filled with a black honey that looks as though it had coal dust in it. The honey tastes sweet, like the rest. I know my letter is too long. **Lizzie Glisan.**

Cedar Rapids, Iowa, Mar. 20, 1883.

The black honey may be honey-dew, friend Lizzie; but are you sure it is not an occasional cell of pollen that makes the white comb honey look dark?

ABOUT THE BEES THAT GOT DROWNED, AND THE LITTLE HIVE.

I thought I would write you one and let you know about my swarm. It has been such a long cold winter that I think they are all going to die. There are lots of them crawl out in the snow, and die. There was one warm day this winter, and it thawed very fast, and the ground was covered with water, and lots of them flew out and got drowned. Papa picked them all up and put them in pans in the house, and they all came to life again, and he put them in a little glass hive, just big enough to hold two frames, and he had a good time getting them in. He put them out in the snow till they got stiff, and then he brought them in the house and put them in the hive and put them down cellar, and they are all right. **Bennie Moon**, age 9.

Youngstown, N. Y., March 23, 1883.

You have given us a timely warning, Bennie. When we first located our apiary there was so much water standing around in puddles for the bees to get drowned in, that we went to the expense of having the whole apiary thoroughly underdrained. Since then we have had no trouble, not even during the wettest spring weather. I should fear the bees your father put in the little hive are needed in the hive where they came from.

FRIEND ATCHLEY'S CHILDREN.

As I never wrote a letter to you, ma says that, as pa has gone away to transfer some bees for a man, my brother Willie and I may write you a little letter and not let him know it, and then he will be surprised when he sees our letters in the JUVENILE. Pa has 125 colonies of bees, all Italians, except one good Cyprian that grandpa Marshall, of Marshall, Texas, sent me. My ma's name was Marshall before she was married. I cook dinner while pa and ma and Willie are at work with the bees. I have a nice little garden all to myself. Pa likes the extractor very much. If you can read my letter, and think I am entitled to a book, send me Ten Nights in a Barroom. **Amanda J. Atchley**, age 9.

Thank you, Amanda. I shall be very glad to surprise your pa in that way.

HOW WILLIE GOT HIS SWARM OF BEES.

As sister Amanda has written you a letter, I will write one. Inclosed find 20 cents. Please send me a 15-cent dictionary, as I have to borrow sister's to get my lesson. I have a pig, and a garden too. I help pa with the bees. As grandpa Marshall and pa were looking through the bees last summer they found a young queen that was just hatched, behind the division-board, from some broken pieces of brood and eggs that were placed there to hatch out; and as they raised the cover she ran under the division-board, and the bees balled her. Pa gave me three frames of brood and bees, and I introduced her, and now I have a fine colony. I tell pa, when he scolds me for having his hatchet, that he ought to get me one, and then I should not want his. Ma says she is going to get a subscriber for that photograph, sure. I made part of these letters by myself, and ma held my hand some. **Willie Atchley**, age 7.

Arlington, Texas, March 24, 1883.

FROM 11 TO 26, AND 200 LBS. OF HONEY.

I think the JUVENILE is the bee-paper published for young folks. In the spring of 1882 my father had 11 colonies of bees, and increased to 26 in the summer. They wintered very well, only two stands dying, and those were weak. Father got, on an average, about 200 lbs. of surplus honey, as last season was not a very good one for honey. Father has just bought a lot of Walter Saymasters, of this town, for $180, and he hopes to put his bees over there this summer. **F. L. Minor.**

New Lexington, O., March 19, 1883.

Thank you, my little friend, for the compliment to the JUVENILE. Your saying, however, that it is the best bee-paper published for the little folks, is something like the boy who got rewarded for being next to the head in school. After the man had given him 5 cents he said, "Hold on, 'bub,' how many are there in your class?" The reply was, "Me and a little girl."—Now about that 200 lbs. of honey. Was it 200 lbs. from the whole 11 colonies, or 200 lbs. from each of the 11? You see it makes quite a difference. Your words, "on an average," look as if it might be 200 lbs. each. But as we don't want to overstate any thing in print, we put it 200 lbs. for all, as you see at the top.

LOOKOUT MOUNTAIN, ETC.

When I last wrote to the JUVENILE we lived in Indiana. We now live near the top of Lookout Mountain. Pa brought 25 stands of bees with us. It is very steep where the hives are placed. Some are on large rocks. It took pa a good while to dig a place for each hive. We can see all over Chattanooga. We can see many nice things on the mountain. Pa is getting up a collection of ores, rocks, and bullets and cannon-balls. I found a bullet one day while we were out looking around on the mountain-side. Pa wrote you a long letter about our trip, but you never printed it, and ma laughed at him, for he had all his trouble for nothing.

Magnola Thornburg, age 8.

Chattanooga, Tenn., March 16, 1883.

Thank you, my little friend; but I am very sorry indeed to be obliged to say that your father's letter is among a great heap of others, waiting for a place. Tell your ma not to laugh, for we will see that he has not had all his trouble for nothing. Ask your pa if he is sure the top of a mountain will be a good place for bees. Will they not have to go down in the valley for honey, and then fly up hill with it? It seems to me I would have the hives on the lowest ground, so that the bees might load up with honey from the flowers, and then sort of "slide down hill" when they are sailing home.

REPORT FROM CANADA.

Pa had 45 hives of bees when he packed them last fall; he looked at them this week, and he found 12 stocks dead. Pa got my sister and me a swarm each last summer for helping him with them. They are both alive yet. I like bees, but they do not like me. We got first prize for honey and beeswax at Lindsay Fair for 3 or 4 years. If you ever come to Reaboro, come and see us, and I will give you some nice white honey. Do you think you could find our house? We are next neighbor to John and Robert Calvert's father. Ma says if she ever goes to Medina she will take me with her to see you and your bee-yard. I hope she will soon go. We had 2000 lbs. of honey year before last, but had not more than 400 lbs. last summer. My two sisters took off 160 1-lb. sections from two hives one day. EMMA HICKSON.

Reaboro, Ont., Can., Mar. 31, 1883.

DECOY HIVES—A FACT FURNISHED BY ONE OF THE JUVENILES.

Last spring we didn't have any bees at all; we had some hives (in which we used to keep bees) standing in the yard. One day we saw bees flying around it; they came and they went until they got the hive clean; they then moved into it. Another swarm came soon after, but they died. We put the remaining swarm in a box with some straw about them, but it was too damp, and some of them died. We then put them up stairs. They are all right now. This is my first letter. GERTHA RIBBLE, age 13.

Cedar Rapids, Linn Co., Iowa.

Thank you, Gertha. You have revived the old matter in regard to putting up decoy hives. Some years ago it was suggested, that if convenient hives were fixed in readiness for the bees when swarming-time came, they would go into them. You see, you have given us proof that this may be sometimes so. Who can give us more facts of new swarms going into hives already provided for them?

HORSEMINT HONEY; IS ITS PECULIAR FLAVOR GOING TO INJURE THE SALE OF IT?

My pa's bees are doing very well. He has promised brother John and myself a bee-hive apiece if his do well this year, and I shall be very much delighted with them. The most of the honey that is extracted here is flavored with horsemint, and it is very good. The honey that is made late in the season is generally bitter. Is not very good to eat. It does quite well for the bees to eat in the winter. It is flavored with wild chamomile, and that makes the honey bitter. SIMME CARR, age 11.

Maysfield, Milam Co., Texas.

I am glad to hear about horsemint honey, my little friend; and while I think about it, I have some good news to tell you in regard to the horsemint. Last year one of our friends in Texas sent us a can full to try. It was very thick and light-colored, but it had a twang to it that few of us could like very well. After trying several times to eat it, it was set away in the cupboard and left until this spring. As we had to cut a round piece out of the top of the can to get at the honey, it stood open all winter. Well, this spring I was most agreeably surprised to find the unpleasant flavor almost entirely gone. In fact, we now pronounce it most beautiful honey. It stands in a quart fruit-jar, and is so wonderfully clear that people inquire what it is. It is so thick that the jar could be turned over in cold weather, without spilling it. The flavor is somewhat similar to clover, with a slight horehound taste, or something nearer like horehound than any thing else I can think of. Now, then, friends, set your horsemint honey in open dishes, protected from dust and flies; and I think if you let it stand long enough you will find the peculiar unpleasant flavor has entirely disappeared. While we are on this subject, I believe it is true that the same treatment will remove any unpleasant flavors from any honey; even though gathered from seed onions, I have been told it becomes perfectly sweet and pure after standing long enough either in the hive or in exposed vessels, in the way I have mentioned.

COUNTING THINGS, AND SOME OTHER MATTERS.

RAPIDITY AND ACCURACY.

I WONDER how many of these children can count correctly. Suppose your mother gives you a basket of eggs, and tells you she wants you to tell her exactly how many there are. Can you do it, and have it right the first time? How old must a boy or girl be to count, say four dozen eggs? Again, if I should set you at it, how would you go to work? I fear there are a great many of you who would count 1, 2, 3, 4, etc. Now, my little friends, there are many reasons why this is a very poor way to count any thing. Sometimes we see big men whose time is worth from $1.00 to $1.50 per day, or even more, who will pick eggs out of a basket one at a time in counting them, and even then make mistakes. Grown-up people often count pennies in the same way; and when we get new hands in the shop, counting out pieces for frames, they almost always commence counting one by one, unless they are watched and told better.

Shall I tell you the better way? The better way of counting eggs, you will easily discover if you will watch the man to whom you sell eggs. You will observe that he takes three eggs in each hand, and lays them in the basket. In this way he is counting six at one operation. He does it without thinking, and almost without the possibility of making a mistake. All he has to do is to count the number of half-dozens. In counting loose pieces here in our factory, we are in the habit of taking five in each hand. Lay them down together, and you have a heap of 10. Do the same thing until you have 10 heaps of 10 each. Now gather them up and you have 100, without any mistake. After a little practice, the fingers will count five without even knowing it, and you will soon learn to detect 10 almost at a glance. So you see your work is proved as you go along. In this way a little girl will count comb-guides faster and more accurately than four big men would do it in their awkward way of counting one at a time. One thing more: When you have to count a number of things, have them very handy. Suppose, for instance, you want to count out 50 honey-tumblers out of a barrel. One way would be to take one tumbler in one hand out of the barrel, and set it into a basket on the floor. Do this 50 times, and you would have 50. And in stooping over and getting up 100 times you would probably get pretty tired. I have seen full-grown people tire themselves out in work, almost as thoughtless as this. Now I will give you my way: First, set your basket on a box or stool so the edge of the basket will be on a level with the barrel. Now count out your tumblers with three in each hand; or if your hands are small, two in each hand; or, if the tumblers are very large, perhaps one in each hand. Work rapidly, and prove your work afterward by weighing, thus: Weigh half a dozen tumblers; and then after you get through, weigh the whole. In this way you know there is no mistake. You see, there are two things needed in counting articles — rapidity and accuracy. Suppose you should say you don't care if you are slow. My little friends, a slow person will have to work for 50 cts. a day, where a quick and accurate one gets from $1.50 to $2.00 a day, or even more. There are many other similar ways of expediting work and to assure accuracy, which I can not take space to mention to you now; but the same general rules that I have mentioned to you now will apply in counting all kinds of work.

But few people understand how to count money rapidly and accurately. A great deal of time is taken to count it, mistakes are made, more time is taken to correct them, misunderstandings come up, these take more time and sometimes hard feelings, which last years, are the consequences. Our time clerk who has just been around, pays out $400 or $500 every Saturday afternoon, and when she pays the boys and girls, she always makes every one of them count it after her, and give her an assent that it is right. This prevents any one from going after her to tell her she has made a mistake. When you pay *anybody* money, always insist that they count it, and acknowledge it is all right. Before I adopted this method, every little while somebody would insist we made a mistake, and did not give the right change. Now in regard to counting money. If you have many coins to count, put them in piles 10 high, then put your piles 10 in a row. If the piles are not of an exact height, you can see at a glance that there is a mistake somewhere. If you have considerable money, assort it so each coin will be by itself, then put on your book so many of these, and so many of those, until you get it all down. If anybody should afterward tell you you have made a mistake in counting, you can say to them pretty conclusively that you did not. If you do business in this way, by and by you will get a reputation for accuracy; and who is there who does not admire and respect an accurate person? Why, I have clerks so accurate that I would depend on their counting, a great deal quicker than I would my own. Such clerks, of course, always command high wages. Now, then, who can count four dozen eggs, do it the quickest, and have it exactly right, and not break any?

KIND WORDS FROM OUR CUSTOMERS.

The A B C came to hand all right. I would not take $5.00 for it, if I could not get another one.
Pennsylvania. T. R. PHELPS.

The little ones here are delighted with the counter goods. They are very nice. W. B. CORBETT.
Bennettsville, S. C., March 28, 1883.

Those scales came in about 30 days after you shipped. They fill the bill; glad you took the liberty to send by freight. E. S. MILLER.
Dryden, Lapeer Co., Mich., March 20, 1883.

My hundred hives arrived a few days since, all, as far as opened, all right. I wish I had ordered 300, as I find I can sell them. M. M. MORRISON.
Corsicana, Texas, March 31, 1883.

The Story of the Bible came all right. We think it is a very handsome book, and just the book for young folks. MRS. MARY J. RUGER.
Conklin Station, Broome Co., N. Y., Mar. 8, 1883.

I received those goods the 17th, and am greatly pleased with them, especially the A B C book. I think it is a perfect gem. J. P. ALLSHOUSE.
Evansport, Defiance Co., O., Mar. 23, 1883.

The watch you sent me is all right. It is a nice little watch. I bought it for my boy, and he thinks so much of it he wouldn't sell it for any money.
Hustisford, Wis., March 28, 1883. A. L. LEHMAN.

Please find inclosed 75 cts. in stamps for a Clark's smoker by mail. They are a little wonder, and can't be beat. Please send as soon as possible. It is for a neighbor. EDWARD E. CHAPIN.
La Salle, Ill., Mar. 15, 1883.

PROGRESSIVE.

Seven years ago, when I first began keeping bees, there was not a bee in town; now there are 30 bee-keepers, who keep from 1 to 75 swarms each.
Castle Hill, Me., Mar. 17, 1883. EDW. TARR.

The last bill of goods sent did very well, and any one who would find fault with any of them would be hard to please. Your $7.00 mandrel is a little beauty. F. D. CLARKE.
New York, Feb. 14, 1883.

The 30 lbs. of fdn. is received. It can't be beat, especially the thin worker for sections. GLEANINGS is *not* "flat" yet, and never can be with A. I. Root at the helm. HERBERT LANGDON.
East Constable, N. Y., Mar. 20, 1883.

I made about 10 lbs. of fdn. to-day to try my mill. I like it so well that I shall have to send you a sample of about the third sheet I made. Publish my praise of the mill to the world, if you wish. Any one who will try can use it. N. A. SANDERS.
Montevideo, Hart Co,., Ga., April 7, 1883.

I had intended that you should not have an opportunity of notifying me that my time had expired; not that I intended running away, nor because I did not like friend Root or GLEANINGS, senior and junior, that I would not be without them for the small sum they cost. I do not flatter the editor, for I do not like flattery myself, when I say that I have formed a very high opinion of him as a gentleman and a Christian, for a true Christian is ever a gentleman.

CHRISTIAN UNITY.

I hope the editor is a Baptist, for I am; but whether he is or not, I am sure he is a Christian, because of his words and works, and I love him as such. Now, I hope that not only the editor, but all who read this, will stand up nobly for the Lord Jesus, who is worthy of our love and adoration.
E. J. HAINES.
Cheltenham, Ontario, Canada, Feb. 27, 1883.

[I commend your concluding sentiment, brother H., and earnestly pray that, no matter what the denomination, we may be a unit in every good cause. Thanks for your *very* kind words.]

I received the Waterbury watch Feb. 26; it has been running ever since, and I am more than satisfied. It has not varied a minute since I got it. It is very cheap indeed. NIELS LARSEN.
Fairview, Sanpete Co., Utah, March 10, 1883.

SILVER-PLATED KNIVES.

The knives you sent came all right. They are "just splendid" for only $1.75; thanks. Bees doing finely. MRS. NELSON KELLEY.
Ferndale, Whatcom Co., W. T., March 10, 1883.

I received those two bbls. of tumblers (481 of them), and there was not one of them broken. Every one was wrapped up in paper, and kept nice and bright. Many thanks. WM. FULLER.
Woodville, Wis., March 27, 1883.

OUR $1.00 CARPENTER SAW.

That rip saw I would not take a $5.00 note for, unless you keep more just as good. I think it came from the top of the heap. J. M. TAFT.
Arcadia, Wis., Mar. 12, 1883.

OUR FDN. MILLS.

We are especially pleased with the fdn. machine. We dipped a few sheets of wax, and rolled them nicely in a few minutes. A. R. NISBET.
Dobyville, Ark., Feb. 21, 1883.

Tell Blue Eyes she has a namesake at our house. She's a little over three months old, and can crow and laugh, and sit alone a little. C. KINGSLEY.
Greeneville, Tenn., Dec. 9, 1882.

[May God bless the little namesake, friend K.]

My wife sent to you for a Waterbury watch for a Christmas present for me, and as it keeps good time, looks so well, and is so cheap, there are some of my neighbors who want me to send and get them one.
E. S. COLLINS.
Cedar Lake, Montcalm Co., Mich., March 26, 1883.

I received my 25-lb. box of fdn. in good condition, and can say that I like it the best of any I ever saw. I am perfectly satisfied in all parts in which you are concerned; but I thought the freight bill ($1.45) was rather exorbitant. ELMER CROSS.
Racine, Meigs Co., O., March 28, 1883.

I suppose you will wonder what "Zalmon" wants now. Well, I will soon tell you. Those little ⅝-in. wire nails are the nicest thing in the whole business for making our little quart berry-baskets.
Gustavus, Ohio, Mar. 12, 1883. Z. D. ST. JOHN.

I have not used any tobacco for over one year, after using it for 20 years. Has any one who took a smoker for quitting done any better? I think if there is a smoker coming either way it is to you.
THOMAS C. WILLIS.
Breckenridge, Mich., March 13, 1883.

GLEANINGS and A B C came to hand in due time, and I am now having a royal time in perusing them. It seems to me that every apiarist should feel deeply thankful to you for the A B C, for it is certainly a jewel. May the good Lord help us to benefit by its teachings. F. E. PARSONS.
Rochester, Wis., March, 1883.

The full-dial Waterbury watch came safe to hand, and is running well thus far. I like it so much better than the old style, I would not take ten dollars for it, if I could not get another like it. Thanks for promptness and fair dealing. G. J. FLANSBURGH.
Bethlehem Center, Albany Co., N. Y.

THE JONES PAILS.

The goods which you sent me came to hand all right, and in good order. Grocerymen are very much pleased with the tin cans. I think they will like to handle honey in that shape. The labels are very neat. E. J. COOK.
Owosso, Shiawasse Co., Mich., March 28, 1883.

The socks and envelopes were received all right, and I must say they were very cheap. The socks would cost me here at least 50 cts. per pair, and the printed envelopes are just what our printer charged me $2.00 for. Your price is just half that. I reckon you must have "stolen" them. M. D. DUBOIS.
Newburgh, N. Y., Feb. 21, 1883.

I received your postal on the 12th. I have had several offers of employment. Your paper is *the* one to advertise in. E. S. FOULKS.
New Albany, Floyd Co., Ind., March 13, 1883.

The honey-knives are at hand, and my friends are gone off rejoicing to think they got their goods before they thought the letter had time to get to you. Thanks for promptness. The Star saw-set and cant file are at hand. The saw-set is just what everybody needs. Perfection, I think. E. J. ATCHLEY.
Arlington, Texas, March 24, 1883.

I am well pleased with the goods, and especially with chaff hive; it is far ahead of any thing I have ever seen in the way of a home for our industrious little pets. One other thing I don't understand about the chaff hives; that is, how you can make them as cheap as you do. J. W. ROSEBERRY.
Kent, Mo., March 20, 1883.

Friend E. S. Miller has sent the extra bottle of ink, in place of one broken. Friend Miller is a perfect gentleman, and a *good* workman. The stamp sent, etc., gives perfect satisfaction. It is a great satisfaction to deal with good square honest men like you and others whom you recommend. *Dominus vobiscum.* R. C. TAYLOR.
Wilmington, N. C, Mar. 19, 1883.

[Which means, I presume, "The Lord be with you."]

It seems to me you place more confidence in human nature than the generality of people, or you would not have sent the second lot without first receiving the first one again, or their equivalent — cash. JOHN S. SNEARLY.
Williamsville, N. Y.

[Friend S., I have more to fear from the carelessness and neglect of humanity than I have from willful dishonesty; or, at least, that is my experience among the bee-friends.]

The goods came to hand in the nicest order. Please accept my hearty thanks for your promptness. I am very much pleased with the fdn., and astonished to get so excellent a quality in the other goods at the low price you sell them. Express charges, 75 c. Some time ago I received a box, lighter, and about the same size as yours (goods not in your line) from one of your neighboring counties, and the express charges were $2.00; therefore I asked you to send the goods the cheapest way. T. HILDEBRECHT.
Clarksville, O., March 14, 1883.

KIND WORDS FROM SCOTLAND.

The Home Papers are particularly attractive. They somehow contain the very message and advice we are in need of. Many thanks, also, for the children's portion. Bees had a wet summer during 1882. With great attention I succeeded in carrying off the prizes for section-box honey. Through a firm in Glasgow (dealers in American wood) I got from you 2000 Simplicity sections; but as the season was so bad, only about the half have been disposed of.
JOHN MAIN.
The Cross, Doune, Perthshire, Scot., Dec. 27, 1882.

KIND WORDS FROM OUR FRIEND "ANABEL."

The A B C is received. Many thanks for sending cloth binding and the pamphlet. The book is both beautiful and useful. We took our bees out yesterday. There were 42 in the cellar, and every one was alive and in good condition. Out of 20 in the house apiary, 3 did not answer to the roll-call. We have still about 2000 lbs. of honey to dispose of. The market seems very dull. ANABEL RONALD.
Grandview, Ia., Mar. 15, 1883.

[Who will take friend Anabel's honey? If it is clover, I will give 10 cts. for it *delivered here.*]

I am pleased with the extractor, and hope I shall succeed with it just as well as I am pleased. The scales are just about the same that I was asked $12 for in Greensburgh, our county-seat. I set them up without any difficulty, and tested them, and found them correct. They told me that my weight was 117, and that of Mrs. C., 108. The other things are satisfactory and nice. I shall have to take a lesson, I guess, before I am an expert hand with soldering-tools; but I can do it. You will please accept my

sincere thanks for good goods, promptness, etc.; and if I make a failure with any, you are not at fault. T. J. COOK.
Newpoint, Ind.

[You see, I promised to send my sister a barrel of hickory nuts, walnuts, and butternuts, and the man I was going to get them of was slow in bringing them, and this is what she wrote:—

Seven little youngsters, brim full of fun,
Wondering each day why those nuts do not come.
Mamma at her work often wonders, too,
How the time is passing with dear sister Sue.
Pack her off to Michigan for a little visit;
Just a few weeks, please; you will never miss it.

Manistee, Mich. Your sister SARA.

I didn't forget, sister mine; but the man said the nuts were not dry enough so they wouldn't mold; says they will do now.]

JUVENILE for Feb. has not come yet, playing truant on the road, I suppose. Flanagan is here as busy as a bee, getting bees for the northern market. I think he has solved the wintering problem; viz., take the bees away from the winter. If you stop the queen, bee, drone, wax, square list and counter departments, don't stop Our Homes, as we can not get along without them; and also rear a king or queen to take your place before you are superseded. D. W. REIZIE.
Carrollton, Jefferson Co., La., March 13, 1883.

[Thank you for your kind words, friend K. May God help me to so instruct our children, that when the time comes for me to lay down the Home Papers, with all the rest of my busy cares, that one of them may be able to minister to the kind friends whom I have found through the pages of GLEANINGS]

A PLEASED CUSTOMER.

The box of goods shipped to my address the 27th Feb. is received. The freight was 85 cents. By express it would have cost $1.10. Your system of packing is just perfection; every article was in prime condition, saving me 25 to 40 per cent over buying them here, while some of them could not have been bought here at all. Those table (kitchen) knives at 10 cts. each are a boon, as it is so difficult to buy knives without forks at the stores, and these are so well made and nicely finished they are exceedingly cheap. That Story of the Bible is a grand thing for children. I was surprised to find it a bound book, so well made. I wish I had ordered 10 bunches of those 5-cent envelopes instead of one.
Portland, Mich., March 12, 1883. S. C. PERRY.

FOUR CENTS WELL INVESTED.

I have been dealing with scamps, or trying to, for some time, and find out it doesn't pay; so I have made up my mind to deal with honest men in the future; and as I think you acted like one, I have given you the preference. Last summer I sent for the A B C and some other things, and they all amounted to $1.96. I sent a $2.00 bill, expecting you would send the things and keep the money; but the things came all right, and 4 cents in stamps. I call that honesty refined, as I should have been satisfied, nor did I expect the change back, as the amount was so small. I was well pleased with all the things, especially the A B C. J. F. VERGASON.
Marlborough, Hartford Co., Conn., March 15, 1883.

[It would seem, friend V., that that four cents was well invested. We have, until recently, been in the habit of giving credit of what remained over after filling an order; but of late I have told the clerks that they might put in small amounts in postage-stamps. So in your case, it seems they put in the four cents as usual. I am sorry to hear that your experience has been unsatisfactory in dealing with your fellow-men. We are glad to say that we find very few among bee-men who do not seem to want to do right, after they once get a fair understanding of the matter.]

THE WATERBURY WATCH.

My watch came all right, and was giving good satisfaction till it accidently got a fall which broke a pivot from one of the wheels, which could be seen through the crystal. I took it to a jeweler for consultation, which, of course, I could have free. He told me it would be worth $2.50 to repair the damage that could be seen; and as I did not employ him, and the watch was not opened, I don't know how much more damage was done. But I sent it to the factory, and it was repaired and returned at a cost of 50 cents for repairs and postage, and it keeps as good time as any watch I ever carried. I have great confidence in the Waterbury watch, and consider it a very economical one to own, for the following reasons. 1. Its cheapness; 2. Its quality as a timekeeper; 3. The small cost of repairing when sent to the factory. The greatest objection I have had to it was the time occupied in winding it; but I have overcome that by making a key with which I can wind it in one-half the usual time, and now to wind it is so much fun that I am always sorry when it is done.
Canton, Ill., Jan. 8, 1883. G. W. COLE.

THE BOY WHO SUGGESTED JUVENILE GLEANINGS, AND ALSO SOME KIND WORDS FROM THE FATHER.

Here is the photo of my son Charlie who wrote to you two years ago to publish GLEANINGS in the middle of each month. He was nine when it was taken. Now about those long letters, just keep them, and when your business grows so you can publish a daily, they will come handy. For the monthly GLEANINGS, boil down, skim, clarify, purify, and sift. It is better to offend one than all. Be careful not to get your heart on the new house, but remember there is one in heaven, that will not be spoiled by smoke. We remember how, a little over one year ago, when we finished our new house, we had all the walls hard finished, and how much pains we took with one room for mother. But she never occupied it. But we trust she is in heaven, as it was she who taught our infant lips to pray. You remember I wrote how God took all the tobacco poison out of me in a moment. Well, even now some of my friends want to know if I have a desire for tobacco. No, not a bit. He is keeping me, and I expect he will. Brother, keep trusting him, and asking for more faith for all your wants, especially for the Homes; do not fail to speak the whole truth, for it is to religion that you owe your prosperity. Hold up both hands; and if, like Moses', they should get tired, remember there are Aarons and Hurs who will hold them up.
Oran, N. Y., Feb. 26, 1883. WM. H. BALCH.

[May God bless you and your boy, my good friend Balch. I do need your prayers and your sympathies. I am very glad to know you have conquered tobacco, and I am trying to trust him every day through all my cares.]

USEFUL CARDS, FOR GIVING TO CHILDREN.

Have you had time to print those little prayers on cards, and also those like the ones you sent me about swearing? You said you would print some when you had time. I have a class of little ones in Sunday-school. They don't know any prayers. "Now I lay me down to sleep" would be a good one. If you will send me some I will pay you whatever you ask. All my scholars learned the card, "Jesus, teach me not to swear." I think some of them will remember it as long as they live. JOHN WATT.
Farnham Center, P. Q., Can., Mar. 7, 1883.

[We have all the cards in stock now, my good friend, and will mail as many as anybody wants, free of charge, to any address. The kind we have in stock are as follows:—

Now I lay me down to sleep,
I pray the Lord my soul to keep;
If I should die before I wake,
I pray the Lord my soul to take.

Jesus, teach me not to swear;
This shall be my earnest prayer;
All day long, at work or play,
Jesus, teach me what to say.

It chills my blood to hear the Blest Supreme
Rudely appealed to on each trifling theme.
Maintain your rank; vulgarity despise;
To swear is neither brave, polite, nor wise.
You would not swear upon a bed of death:
Reflect; your Maker now could stop your breath.

Please do not be afraid, dear friend, that you will send for too many. I will gladly have printed and sent out all the world can use. Of course, I would not want them thrown away and carelessly lost. Whenever you have an opportunity of giving them where you think they will do good, do not feel troubled about the number you use, but rather rejoice that you can use so many.]

Juvenile Gleanings.

APRIL 15, 1883.

Contents of this Number.

April Showers, etc............212
Atchley's Children..........219
Bees, Butchering............214
Bees, Watering..............214
Bee, The Coming............213
Cards for Children..........223
Chalcedony....................218
Corn, Hot, for Hens.........215
Eggs, How Many from Qu.?.218
Extracting Late..............215
Florence and the Bees 218
Foundation, Old.............217
Four Cents well Invested...223
Harry March's Letter.......211
Honey, Black.................219
Honeyville 218
Kind Words..................221
Lookout Mountain 219
Maple Sugar 224
My Neighbors...............209
Scotland......................222
Sugar-cane for Bees........218
Virgil..........................210
Watch, The Waterbury.....223

Woe unto him that striveth with his Maker.—ISA. 45: 9.

JUVENILE is just one year old to-day.

UNTIL further notice, we will pay $1.00 each for dollar queens. The same will be furnished for $1.50.

WE are still about 25 orders behind on fdn. mills, in spite of the best we can do.

WE have now plenty of extra nice alsike, $15.00 a bushel, $7.75 for ½ bushel, or $4.00 per peck.

WE still continue to get plenty of wax at 35 to 40 cents; therefore the present price of foundation will remain unchanged.

CAN'T any of our friends in California mail us any more of the yucca brushes, such as we have been selling, for brushing the bees off from the combs?

ADVANCE IN THE PRICE OF WIRED FRAMES OF FDN.

WITH the present advance in prices on fdn. we find ourselves obliged to put metal-cornered frames, wired and filled with fdn., at $18.00 per hundred, instead of $15.00 as heretofore. We make the remark, that we are producing a better article now; that is, the sheet is of an equal thickness throughout.

A SMOKER FOR LITTLE MONEY.

WE have, laid up on a shelf, several dozen old Quinby smokers that cost us something over $1.00 apiece at the time when they used to sell for $1.50. We should be glad to sell these now for 25 cts. each. If wanted by mail, send us 15 cts. extra, for postage. Each smoker is packed in a pasteboard box, ready for mailing.

LARGE SHEETS OF THIN FOUNDATION.

MANY customers still persist in calling for thin fdn. for starters, in large sheets. Please bear in mind, friends, that we can get fdn. with a very thin base only by making it into very narrow strips, say from 3 to 5 inches wide. We can make it 6 inches wide; but even then it is not quite as thin as if made five inches wide or less.

SUGAR FOR MAKING THE GOOD CANDY.

WE are happy to say that the powdered sugar is a decided success, and we have just purchased a barrel for that express purpose. We ordered the finest and purest sugar that could be procured. It is especially an improvement for the queen-cages, because it obviates the sifting-out of the dry sugar. We can furnish this powdered sugar for 12 cts. per lb.; in 10-lb. lots, 11½ cts.; or 100 lbs. at 11 cts. per lb. Simply knead it up into a dough with good clover honey, and it is ready for use immediately.

THE call for sections has been so great that we are unable to make our drying-house season the lumber as it should be, as fast as wanted. Should you get any sections that are a little damp, it may be well to open them out to dry a little, unless they are to be used very soon. If you fold them right up, they will work all the better. We are now having fine weather, and have an immense stock of basswood. We shall soon have any quantity of nicely seasoned lumber.

WE are now approaching the honey months, dear friends; and to those who have neglected ordering until now, I shall have to say that we can't be responsible for the delays, although we will return your money promptly at any minute when you get tired of waiting. Orders by mail or express, as a rule, go off the same day the order is received, or the day after; but large orders, to go by freight, are many times unavoidably delayed; and one of the worst features of these delays is, that we can not tell positively when the goods may go. For instance, we are dependent on other manufacturers for many goods. If they are delayed by strikes or fires, or other causes, it delays us. Also on many goods of our own manufacture there is liable to be a sudden run far beyond our capacity. Of course, we shall try hard to avoid delays or disappointment to those who trust us with their patronage.

MAPLE SUGAR VS. CONFECTIONERY.

CHILDREN always want candy, and somebody has said that children always ought to have candy, or some equivalent. While in Cincinnati last fall, friend Muth said that he doubted whether any pure candy could be found in the city; that is, candy made of pure cane sugar. Well, maple sugar bought of our home farmers, we know is pure, and we have this season purchased more than a ton, made by the farmers directly into little cakes. By taking more pains than they have ever done before, they have given us little cakes of a creamy whiteness and delicacy of flavor that seem to me far in advance of any confectionery that was ever made in any of the cities. To keep these little cakes nice, and preserve the flavor, we have had our girls wrap them in tissue paper just as fast as they were brought in from the sugar-camps. We sell them for 3 cents each, 25 cts. for a package of 10, or $2.00 for a basket of 100. If you want a sample of what can be done in the way of nice maple sugar, just send us two 3-cent stamps, and we will mail you a sample cake.

ALLEY'S NEW BOOK ON QUEEN-REARING.

WE have just received friend Alley's book on "Queen-Rearing." It is nicely bound, and printed in clear, attractive type. The first one hundred pages is devoted wholly to queen-rearing. In addition to this there are two essays by practical bee-men. The first essay is on the "Management of the Apiary," by Geo. W. House; the second is on "The New Races of Bees," by Silas M. Locke, formerly employed by D. A. Jones.

While we can not fully agree with our friend Alley in some things, yet on the whole he has given us many practical hints. With regard to cell-building in rows, we can hardly believe that his method is entirely new. In our own apiary the boys have used a modification of the same plan for several years back. As, however, the book contains a summary of many of the best methods of queen-rearing, we are glad to recommend it to our bee-keeping fraternity. It contains 184 pp. and 20 illustrations. We can mail it for $1.00, or send it by freight or express with other goods for 94 cents.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany.................—
Bee Entomology.............—
Blasted Hopes.................258
Editorials 267
Forgettery......................249
Heads of Grain...............252
Honey Column.................228
Humbugs and Swindles 230
Ladies' Department 239
Notes and Queries............261
Obituary.........................—
Remindery 267
Reports Encouraging.......259
Smilery..........................240
The Growlery.............. —
Tobacco Column.............266

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Asparagus.......................261
Aster 253
Axtell's Letter..........244, 258
Banner Apiary.. 229
Basswoods, Seedlings.. 262
Bee-man, A self-made.......252
Bee-tree, To tell how Far...241
Bee-caves.......................262
Bee-hats.........................244
Bee-fevers 255
Bee-keeping for Women....235
Bee, The Coming............240
Bees, To Water..............252
Bees, Wintering.............247
Bees by the Pound..... 231
Bees, Remov'g from Cel.244,250
Bees, Starting in Sections..246
Bees, Train's Improved.... 249
Bees, Wingless...............254
Bees in Florida 262
Bees Flying 18 Miles, etc.241,254
Bees 90 Miles an Hour 255
Brood-rearing 234
Brood, Another Disease of.256
Brush, Cook's.................231
Buzz-saw, Cider-mill........242
Chickens in Apiary........ .258
Circulars Received 269
Cloth, Enameled..............250
Conventions....................269
Doolittle.........................250
Drone Combs for Ext'g.....245
Duff's Report..................255
Facts and Fallacies..........238
Fdn., To Fasten 236
Fdn., Money in Making.... 257
Figwort, Tall..................261
Foul Brood 234, 235
Foul Brood, a Protest...... 256
Frames, Nailing.............257
Frames, Wiring 248
Frames, Scraping Wired...262
Gloves, Substitute for.......244
Good, I. R. 241
Good Candy 252
Green's Report..............243
Hedge, Honey-bearing......248
Hive, Empty, Under Bees...254
Honey-dew bad for Bees 256,257
Honey-house. 251
Honey, Broken, To Sell.. ..244
Honey, Marketing...........251
Honey, To Soften by Steam 252
Honey, Maple..................254
Honey, New 261
Honey from Tobacco........262
House, How He Did It.......246
Ice in Entrances..............245
Mats for Frames..............268
Nebraska, Plants of.........238
Paraffine with Wax.........242
Plaster Plates................245
Queens, Mutilated 253
Queens, Young, leading out253
Quinine 252
Raspberry......................256
Rust and Frost.... 272
Sawdust vs. Chaff...........253
Saw-table, Cut-off...........236
Saw, Foot-power.............258
Sections, ½-lb. 218
Separators of Wood........ 254
Smokers For Vermin........262
Statistics of Bees............233
Stings 254
Sugar Syrup...................257
Sugar, Maple, for Bees......258
Swarms, Artificial...... ...244
Swarms Not Clustering.....242
Swarms, Early 257
Vinegar from Honey.236,243,262
Wax-extracting...... 245
Willows 248
Wooden Vessels for Honey.257

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SCIENTIFIC BREEDING TELLS.
If you want the best and most beautiful queens, try our strains, which we have obtained by long and skillful breeding. Orders filled promptly, and satisfaction guaranteed. Circular free.
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COLERAINE, - FRANKLIN CO., - MASS.
5tfd

70 CENTS PER POUND
For bees in 100-pound lots; 20 lbs. at 75 cts. per lb.; 1¼ lbs. for $1.00. I will sell at these prices between May 20 and June 20. *T. P. ANDREWS*,
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Prices 25 per cent less than in A. I. Root's circular (due his reputation), and ready 1st of April. 100 queen-rearing colonies. DOLLAR QUEENS, and BEES BY THE POUND, a specialty.

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SILVERHULL BUCKWHEAT, $1.50 PER BUSHEL.

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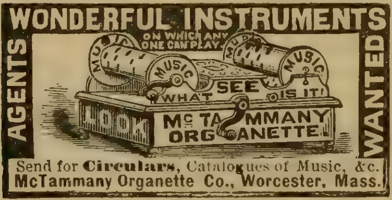

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ITALIAN, CYPRIAN, and HOLY-LAND QUEENS.

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SAVE MONEY!

Nuclei, 3-frame and tested queen	$3 50
Nuclei, 3-frame, untested "	3 00
Nuclei, 4-frame and tested "	4 50
Nuclei, 4-frame, untested "	4 00
Tested queens, after May 15	2 00
Untested queens, after May 15	1 00
Full colonies in Simplicity hives,	8 00

Will ship full colonies in April. I will guarantee every thing I send out to be first-class.

3tfd DAN WHITE, New London, Huron Co., O.

IMPORTED QUEENS.

In April,	11 francs in Gold.
May and June,	10 " " "
July and August,	9 " " "
September and August,	7 " " "

No orders received for less than 8 queens. Queens which die in transit will be replaced only if sent back in a letter. 1-6d

CHARLES BIANCONCINI & CO., Bologna, Italy.

Full Stocks of

YELLOW BEES FOR SALE!

WARRANTED NOT EXCELLED.

J. M. MARVIN, 3-5d
St. Charles, - Kane Co., - Illinois.

AT KANSAS CITY, MO.,

I BREED PURE ITALIAN BEES FOR SALE.

Dollar Queens,	in May	$1 50
" "	in June	1 25
" "	after June	1 00

Tested queens double the above prices.

Bees per ½ lb., same prices as dollar queens.

I *warrant* my *dollar queens* to be purely mated. I do not know that I have a single dissatisfied customer; but if there are any such, and they will write me in regard to the matter, I will do the best that I can to render satisfaction.

3tfd **E. M. HAYHURST, P. O. Box, 1131.**

PURE ITALIAN QUEENS,

Carefully bred from imported and home-bred mothers. Sent by mail. Safe arrival guaranteed. No black bees near.

1 untested queen before July 1, $1.25; after, $1.00
6 " " " " 1, 6.50; " 5.50

Tested queens, nuclei, and full colonies.

PLYMOUTH-ROCK FOWLS.—Eggs from this justly celebrated breed of fowls, $1.25 per setting of 13. Send for circular free. J. H. REED, Orleans, Orange Co., Ind. 3tfd

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Five-frame (Langstroth frame) Nuclei, consisting of a pure, young, fertile Italian queen, carefully bred from best imported or home-bred mothers, with five new wired combs filled with brood and honey, and covered with young bees. Better than a natural swarm. Send for circular and price list.

WILLIAM LITTLE, 3-5d
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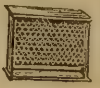

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—UNSOLICITED TESTIMONIALS.—

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I like it better than any offered by dealers.
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It is the best I ever saw. **GEO. WUSTUM.**
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Willing to pay 2 cts. per lb. more than for any I have seen. **F. WILCOX**, Mauston, Wis., Mar. 23, 1882.
The most perfect article that I have seen.
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Have used about 75 lbs. from ——, but I prefer yours. **REV. W. BALLANTINE**, Sago, Ohio.
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Borodino, N. Y. **G. M. DOOLITTLE.**
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EGGS FOR HATCHING.

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Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular, containing directions for introducing queens, remarks on the new races of Bees, &c. Address
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GIVES SATISFACTION.

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1883 THIRTEENTH YEAR. 1883

Italian & Syrian Queens.

Tested queens, in April and May,	$2 50
Tested queens, in June and after,	2 00
Untested queens, in April and May,	1 25
Untested queens, in June and after,	1 00

Sent by mail, and safe arrival guaranteed. Send for circular.
Address **W. P. HENDERSON,**
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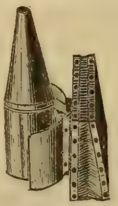
WARRANTED ITALIAN QUEENS, from hardy improved stock, $1.00 each; from imported mothers, 50 cts. extra. Satisfaction guaranteed. None of the new races kept in this vicinity.
2-7 W. H. PROCTOR & CO., Fairhaven, Vermont.



FOR THE

OLD RELIABLE

BEE-SMOKERS

or Uncapping - Knives,

Send card for circular to

BINGHAM & HETHERINGTON,
ABRONIA, MICH. 3-tfd

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have; but at last I am "boss;" Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham & Hetherington.
Respectfully, G. M. DOOLITTLE.

The Excelsior Poultry Yards

are always well stocked with Pure-Bred Poultry and Italian Bees; Extractors, Foundation, Hives, etc., for sale. Job Printing of every description done cheap for cash. Circulars free.
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Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

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MUTH'S
HONEY EXTRACTOR,

SQUARE GLASS HONEY JARS,
TIN BUCKETS, BEE HIVES,
HONEY SECTIONS, &c., &c.

Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers." 1tfd

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1883. **COLONIES, NUCLEI, AND QUEENS,** 1883.

FOR SALE CHEAP.

For terms, address
S. D. McLEAN.
2-5inq COLUMBIA, TENN.

THE VERY BEST

Italian and Holy-Land Queens; also Apiarian Supplies at prices to suit the times. Circular free.
GEO. H. KNICKERBOCKER, PINE PLAINS, N.Y.
5-8d

FOR SALE:

ITALIAN BEES!

After May 15, bees at $1.00 per pound. 5
E. A. GASTMAN, DECATUR, MACON CO., ILL.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CLEVELAND.—*Honey.*—We report our stock of comb honey nearly melted down; a few crates of 2 lbs. No. 1 are selling at 18 to 19 c., and a few crates of No. 2 standing still at 17 c. Choice white 1-lb. would sell at 20. Extracted is still slow at 9 to 10 cts., but stocks are light. *Beeswax*—none in market.
Cleveland, Apr. 23, 1883. A. C. KENDEL.

BOSTON.—*Honey.*—1-lb. sections, 22; 2 lb., 20. Extracted, 10. *Wax*, best, 40 c. CROCKER & BLAKE.
Boston, Mass., April 23, 1883.

ST. LOUIS.—*Honey.*—Dull; light jobbing sales only. Comb at 10 @ 14 c.; strained and extracted, 7 @ 7½. *Wax*—scarce, and wanted at 35 c.
St. Louis, Apr. 21, 1883. W. T. ANDERSON & CO.

DETROIT.—*Honey*—There is but little change in the honey market since last month, except that it is a little duller. Good comb honey is offered at 15 @ 16 c; second-class is not wanted at any price. *Wax*—scarce at 35 c. A. B. WEED.
Detroit, Mich., April 24, 1883.

CHICAGO.—*Honey* remains in a lifeless condition. The sales are small, values unchanged; yet the market is weak. I quote as before. *Wax*—scarce at 35 @ 38 c. R. A. BURNETT.
Chicago, Ill., April 23, 1883.

CINCINNATI.—*Honey.*—The demand for extracted honey is very good, arrivals slow. We have sold, since October last, about 600 bbls., if not more, and are just now almost sold out, while most of our customers are relying on us for supplies. We hope our friends will supply us. We pay 7 @ 10 c. for extracted honey. No demand for comb honey, and prices nominal. *Wax* is in good supply, and brings 30 @ 35 c. on arrival. C. F. MUTH.
Cincinnati, April 28, 1883.

NEW YORK.—*Honey.*—Permit us to quote honey and wax as follows.

Best clover, in 1 lb. sections (no glass), per lb.,	22@23
" " " 2 " " (glassed) " "	18@20
Fair " " 1 and 2 lb. sections, " "	17@18
Best buckwheat, in 1 lb. sections (no glass), "	16@17
" " " 2 " " (glassed) "	14@15
" white clover extracted in small bbls., "	10@11½
" buckwheat " " " " "	8@9

Beeswax—We are selling prime yellow at 40 and 42c per lb. No change in prices on honey since last issue. H. K. & F. B. THURBER & CO.
New York, April 27, 1883.

I have two barrels of light-colored honey to sell; one contains 332 and the other 336 lbs. net; will take $30.00 per barrel for it, and the one sending first will get the larger barrel. This honey was gathered from white clover and other blossoms, and the barrels are waxed and painted, and will be delivered on board cars on receipt of price named above.
WM. H. KING.
Newtonville, Buch. Co., Ia., April 17, 1883.

I have 350 lbs. of nice linden honey and 175 lbs. of dark (heart's-ease) honey, all candied, or grained, in 3 half-barrels, for which I will take 10 cts. per lb., delivered on the cars at Plattsmouth, Cass Co., Neb., charging $1.00 each for the barrels. J. M. YOUNG.
Three Groves, Cass Co., Neb., April 9, 1883.

I have 10 or 12 barrels of nice clover and basswood honey to sell, in iron-bound oak barrels holding about 360 lbs. each. Will sell, delivered on board of cars here, at 10 cts. per lb. for the honey. Barrels $2.25 each. Will sell one barrel or more at a time.
EDWIN FRANCE.
Platteville, Grant Co., Wis., April, 1883.

Reduction
IN PRICE OF FOUNDATION.

Beeswax has "gone up;" but as we bought our stock before the advance, in order to close out our entire stock before the rush of the honey season, we will, until further notice, sell our Vandervort fdn. at former prices—50c per lb. for heavy, and 60c for light. If ordered in 25-lb. boxes, 49c and 59c; and if ordered in 100-lb lots, 48c and 58c.

We can fill orders at once for any size desired.

Address **G. W. STANLEY & BRO.,**
5d **WYOMING, N. Y.**

PERRY'S PRICE LIST
OF IMPROVED ITALIAN BEES AND QUEENS.

	May,	*June,*	*July and after.*
Tested Queens........	$2 50	$2 00	$1.50
Untested "		1 00	90
Hybrid "	1 00	75	50
Bees per pound, no queen	2.00	1.00	90
Nuclei per comb " "	1.50	1.00	75
Full colony " "	5.50	4.50	3.50

Queens raised from a choice imported mother; drones all from a few select queens, no kin to the imported mother. Orders filled promptly; safe arrival and satisfaction guaranteed. Liberal discounts on large orders. Please give me a trial. All inquiries cheerfully answered. **S. C. PERRY,**
5tfd PORTLAND, IONIA CO., MICH.

☞ Having recently sold quite a number of my bees, I shall have about 200 lbs. of beeswax and comb foundation for sale.
Address J. B. MURRAY, Ada, Ohio.

LOOK!

A Perfect MORSE Telegraph Instrument for beginners. Send for catalogue.
5d P. B. KINGSLEY, Greeneville, Greene Co., Tenn.

A FREE GIFT.

Every one sending me, in this month, $1.25 for a Warranted Italian Queen will receive a specimen of my best penmanship (fresh from the pen), worth 25 cts. Fine Italian Queens, from improved stock, a specialty. Circulars free to all. *M. B. MOORE,*
5d Morgan, Pendleton Co., Ky.

HEADQUARTERS FOR TIN POINTS.

Price, 20 cts. for 1000, by express; by mail, 30 cts.
5tfd W. C. GILLETTE, Le Roy, Genesee Co., N. Y.

FOUNDATION MACHINERY.

Cheap, but serviceable. Molds for making sheets 12x12 or 8⅝x17⅛, $3.75. Machinery complete, ready for use, $8.75. See circular of bees, queens, etc.
5p OLIVER FOSTER, Mt. Vernon, Linn Co., Iowa.

BURNT OUT!

Having lost our machinery by fire, we can furnish no more SUPPLIES until further notice. We have a large stock of Italian and Holy-Land Bees, and can ship Queens and Bees as usual. Circulars on application to W. B. COGGESHALL, SUP'T.,
Hill Side Apiary, Summit, N. J.
N. S. COGGESHALL, PROP'R.

FOUNDATION MACHINES FOR SALE.

Langstroth size, $3.50; any size desired, in proportion. Dipping box, 42x14, $3.00. Foundation, 45 cts. per lb. for brood; 47 cts. for sections.
5d JOHN FARIS, Town House, Smyth Co., Va.

GLEANINGS IN BEE CULTURE.
DEVOTED·TO·BEES·HONEY·&·HOME·INTERESTS.
F. A. Whiting

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NOTES FROM THE BANNER APIARY.

NO. 42.

HOW THE BEES WINTERED.

A HEAVY TESTIMONY IN FAVOR OF SUGAR STORES INSTEAD OF NATURAL.

As I did two years ago, so I did last fall; *i. e.*, I prepared bees in different ways for battling with stern Winter's long siege. Some were left unprotected upon their summer stands; some were protected with chaff cushions; others were placed in the cellar, and still others were buried in a clamp. Granulated sugar was fed to a few of the colonies, and one or two of the sugar-fed colonies were left out of doors, some placed in the cellar, and others buried. One year ago the bees came out all alike, as nearly as I could discover. Last winter was not more than half gone before the unprotected colonies out of doors began dying with dysentery; next followed those protected with chaff cushions out of doors, and then came the colonies in the cellar. Before the winter was gone, only one colony out of 11 remained alive out of doors, and that was the one from which the honey had been removed, and sugar given in its place. Of the 19 colonies in the cellar, 7 were alive, but all had suffered from dysentery, except two colonies which had sugar stores; these were in fine condition, scarcely a handful of dead bees, and every thing dry, sweet, and clean. In the clamp, all had suffered from dysentery, except the sugar-fed colonies. Some of them had died apparently from dysentery; others had been troubled very much, and others only slightly. Out of 32 colonies, 27 were alive; some were weak, and 3 were queenless; and after some uniting there remained 21 good colonies. I could discover no difference in favor of colonies that had been used in queen-rearing, or *vice versa*. I now have 29 colonies, and the majority of them are in pretty good order.

Now for just a *little* theorizing. It could not have been cold nor confinement that killed the bees in the cellar and in the clamp, as the temperature and confinement were the same as they were the previous winter. How shall we account for the bees wintering better in the clamp than in the cellar? The theory has been advanced, that bees buried in a clamp are deprived, to a certain extent, of oxygen; consequently they are more dormant, eat less, do not live so "fast," and as a result come out younger and in better condition in the spring. The result of my wintering experiments of last winter helps to confirm this theory. I feel more and more inclined to think that pure cane sugar is the only *sure* thing as a winter food for bees. Heretofore I have fed sugar to a few colonies as an experiment, and henceforth I shall feed sugar to nearly all of my bees, leaving a few colonies with natural stores as an experiment.

A younger brother has come to work with me this summer. He has bought 20 colonies in Langstroth hives, and they will be run for comb honey; so you see there is at last going to be an opportunity for me to see what there is in comb honey.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., April 16, 1883.

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

IT will be remembered, that in the Humbug and Swindle column of March GLEANINGS we printed a little circular from our old friend H. H. Flick, and to-day we received the following letter from W. T. Falconer, successor,to Merriam and Falconer, of Jamestown, N. Y.:—

A. I. Root:—Inclosed find letter which explains itself. Have you received a similar letter, and what do you propose to do about it? Of course, I don't propose to pay, but may be put to some trouble and expense. Can we combine and employ some attorney in case a defense has to be made? Please drop me a card or letter in regard to this. Sorry to encroach on your valuable time, but would rather have your opinion in regard to this matter than that of any lawyer, as you are versed in it from beginning to end. W. T. FALCONER.

Jamestown, N. Y., April 18, 1883.

Below is the letter referred to by friend Falconer:—

Messrs. Merriam & Falconer:—We have been employed by H. H. Flick, Esq., to recover damages from certain persons who have been infringing on his patent, referred to in the herewith inclosed circular. He has been engaged for some time in procuring testimony to establish his claims. He has learned that you have infringed on his patent; and before instituting suit, we write you to say that if you are disposed to act fairly, the matter can be satisfactorily arranged, both as to past and future sales and manufactures. COFFROTH & RUPPEL.

Somerset, Pa., April 16, 1883.

You will observe, friends, that Mr. Flick has induced a law firm to take up his "patent," and proposes to institute a system of blackmail, if nothing further. This same letter, almost verbatim, has been forwarded to us by several other bee-hive manufacturers. You will observe, that friend Flick is going to try to make out that he holds a patent on putting sections inside of any large frames. The idea is most absurd and ridiculous. It is almost equal to getting a patent on using hives two stories high, as some one claimed he had done a few years ago. If any one cares to take the trouble, he will find that our old friend Richard Colvin, of Baltimore, Md., described such an arrangement in the *Agricultural Report* as long ago as 1863, and it is quite probable that the arrangement was in use a long time before that. My advice here is, that if we can learn that Mr. Flick has ever obtained money from any innocent person in the way in which he has now started out, that we, as bee-keepers, club together and set some respectable lawyer at work and ascertain if there is a means to put such chaps as he in some place where they will be prevented from obtaining money on false pretenses from innocent bee-keepers. My attention has been called to a recent attempt to blackmail in Cleveland, O., and the guilty party is now in the Ohio Penitentiary, at hard labor for three years; and if I am correctly informed, the above lawyers could also be prosecuted for trying to scare people, if they are in the conspiracy. Our friends who have been long in the bee business will remember how we have had men blackmailing bee-keepers for using division-boards, enameled sheets, cloth cushions, two-story hives, etc.; and you probably have heard of the result of this. Men who were not informed have paid over their hard-earned money to these scamps, who then went away laughing in their sleeves. It seems to me that we as bee-keepers are now sufficiently well informed, and also sufficiently well off (thank God!) to resist all this work, by combined effort. Now let them come on with their patents on using sections inside of a large frame, or sections made of one piece of wood, or any thing else of a similar character. If they can stand it, it seems to me that we surely can. I have thought best to copy the following from Mr. Colvin's article, found on pp. 532 '3, *Ag. Report* for 1863. You remember that friend Colvin was one of the first to assist in the importation of Italian bees. Later, many of you will also remember, some trouble was experienced when the Italians were first introduced, from the fact that they would not go up into the honey-boxes as readily as the black bees. In commenting on this peculiar trait of the Italians, Mr. Colvin writes:—

> The difficulty of inducing the bees to work in these surplus-honey receptacles is greatly obviated by placing them over the brood-chamber and having no "honey-board" or intervening partition between them and the brood-chamber. A successful remedy for preventing the queen from going up into the receptacles to deposit eggs, and the consequent storage of pollen therein by the workers, thereby injuring the quality and appearance of the surplus honey, may be found in using movable frames in sections, or otherwise, made about 1½ inches in breadth on their tops, and placing between these frames thin perforated partitions, or comb-guides. The space thus allowed for the combs being too thick for one brood-comb, and two thin for two, the workers build but one, the cells of which, being too deep for brood-cells, present, together with the presence of the comb-guides, such uninviting quarters for her royal ladyship that, in the storage of over a ton of honey in such receptacles, I have not had a single instance of egg-laying in receptacles thus arranged. The frames or sections may be made of such size as to contain any desired quantity of honey within their capacity. If several sections are used in one frame they should be made to fit exactly, so that they may be easily and quickly removed by a little pressure.

It is interesting to note that friend Colvin also used something equivalent to our separators ("comb-guides" he calls them), even though it is away back at such an early date.

By the way, friend Falconer, I want to thank you for your concluding sentence. It gave me a sort of stirring-up, and reminded me of the responsibilities that rest on my shoulders, or should rest there. If these things continue, I think I shall have to gather up all of my old books and papers, and have them so classified and arranged that I can, with the assistance of an excellent memory, turn to these things with a little more readiness than I do now sometimes. Many of you know with what enthusiasm and zeal I hunted up and gathered together almost all that had been written on bee culture when I was first led into it. I have now in my possession books written on bees more than a hundred years ago, and almost every thing of importance that has been printed, from that time up to the present.

BUYING BEES BY THE POUND WHEN YOU CAN RAISE THEM YOURSELF.

SOME SENSIBLE ADVICE IN THE MATTER FROM FRIEND HOUSE.

AFTER thanking you for your catalogue which you sent me on application, I write to ask your advice in relation to building up my apiary, in which I met with severe loss last winter. Out of 50 good colonies of bees that I went into the winter with, I have only 10 stocks left; the cause of this, I am confident, was impure honey gathered late in the season. I am thus left with over 300 good brood-combs, some containing considerable honey. I had thought that, in order to save these combs, I could purchase bees by the pound, with queen, or obtain 3 or 4 comb nuclei. My friend Col. Walton, of Industry (who has before dealt with you), is in the same dilemma with myself. How soon can you send out bees by the pound, and queen? and at what price? or would you advise another plan to replenish our losses? Any counsel will be gladly received.

Beaver, Pa., April 23, 1883. WM. S. BARCLAY.

Mr. House replies as follows :—

My Friend Barclay :— All right; if you want my advice, you shall have it. That's just what I'm here for; and if the advice doesn't suit you, you have the pleasure of knowing it was of no expense to you. Now, why in the world do you, with 10 good swarms of bees, and 300 empty combs, want to talk of buying nuclei, or bees by the pound? Why, you are in the neatest possible condition, and you couldn't have more fun than it will give you to increase to 40 heavy swarms, and have 1000 lbs. of extracted honey by fall. I would not attempt to raise much box honey while increasing rapidly. Now, *first* raise about 10 queens from the best queen you have, and get these queens to laying in nuclei just as early and just as strongly as possible. Keep in mind that the number of bees, and hence the number of strong colonies you have in the fall, will depend directly upon the number of queens you have laying, and the *number of eggs they lay.* But don't get careless, and let a queen exist in a hive without plenty of bees for warmth, etc. And as your combs are an essential part of your stock in trade, give them the best of care. Hang the frames in hives, or on racks made for the purpose, at least two inches apart, to prevent ravages of moth, and have them secure against mice or robber bees.

Always have queens on hand, and keep every laying queen at her *level best;* let her *wear out,* if need be; she can easily be replaced. But don't be guilty of *keeping* worn-out queens. Use division-boards, chaff cushions, etc., and spread brood-nest just as fast as you can *with economy,* by use of your empty combs. We wish you and your friend Col. Walton the greatest success, and I shall be disappointed if you meet with any thing short of that.

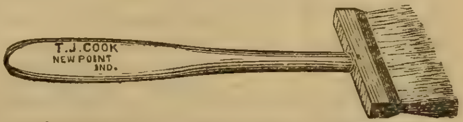
Medina, O., Apr. 25, 1883. W. B. HOUSE.

I entirely agree with the remarks of Mr. House; and, in fact, I have many times felt almost pained to receive orders for bees by the pound from those who, it seems to me, could raise them very much cheaper than we could sell them. It will be noticed that we charge $3.00 per lb. for bees this month. Now, perhaps nearly half of this price is to pay for cages, expense of putting up, and guaranteeing safe delivery to remote points. Another thing: We have purposely put the price high, because we are so overwhelmed with orders every season that our apiary would soon be entirely gone, did we not charge high. It may be urged that I should get more bees and more help; but the truth is, dear friends, I have more cares now to look after than any one man ought to have. Where one has lost *all* his bees, and has nothing to begin with, then bees by the pound, even at our prices, will probably be a profitable investment. The same may be the case with beginners, where they want perhaps a single pound, or others who want them to play with, or study, as may be the case; but where one has an abundance of combs, and ten colonies of bees, they ought to be, it seems to me, able to make $10.00 a day, raising bees by the pound at our prices. That is, they would save $10.00 a day by raising them, instead of purchasing them at $3.00 per lb. I am glad to sell you goods; but I never wish to sell you any thing where you could get it cheaper some other way than by buying of me.—In regard to the manner of raising bees, our journals are full of reports and directions, and our text-books make the matter so plain that it seems to me even a child can take it up and do it successfully; and earnest students often do succeed, even the very first season.

AN IMPROVEMENT SUGGESTED ON THE YUCCA BRUSH.

A LONG-NEEDED WANT SUPPLIED.

SOME time last season I sent to you and got a yucca brush to use in our apiary, and liked it very well, except it was too small; so I invented a *hempen* brush, a sample of which I send you by this mail. The fiber of the brush is sea-grass taken from a piece of new rope. The plan of construction is simple, and easily understood. I hope you will think enough of it to give it a trial. If the brushes are mussed, and out of proper shape, just dip them up to the "head" in water, and press out with the hand, on a board, and when dry they will keep their place.



COOK'S BRUSH FOR GETTING BEES OFF THE COMBS.

These brushes are worth 25 cts. each to those who keep bees; you know a brush of some kind is indispensable, and the cost of such a one as I sent you is nothing, compared to the time it takes to gather asparagus tops, etc. They are worth 25 cts. each, but can be manufactured for about $1.25 per doz.; single brush, 15 cts.; half dozen, 75 cts.

The few warm days we are having just now make me feel well. Bees are working briskly, gathering pollen, and the combs are fast filling with brood. Just now every thing indicates a prosperous season ahead. T. J. Cook.

Newpoint, Ind., April 12, 1883.

Many thanks, friend Cook. The minute I saw your brush I felt satisfied you had done us all a great favor. It is better than the yucca brush, because it is broader, and yet it may be made more substantial also. With us the yucca brushes are so cheap we have been in the habit of laying them around on the ground, and on top of the hives in the apiary. This plan can hardly be recommended; although where a thing of this kind is wanted so often, and is also liable to be wanted by different persons at the same time, it might be a good investment to have several of them — perhaps half a dozen in an apiary of a hundred or two hives. As you have suggested the improvement, friend C., I think you had better manufacture them. Make them strong and durable, and I will gladly take a gross of them at the price you mention. They can be furnished by mail for about 18 cents each, if made no heavier than the one you sent us.

"Remindery,"

Or Department for duties to be attended to this month.

NOW is the time with most of you for business in real earnest. The advice given in different columns by Mr. House will bear reading carefully, perhaps several times. Of course, it makes a difference whether you wish increase of stock or honey. Decide first what you want to do, and then do it. I presume that with most of you, fruit-trees will be in bloom when this number reaches you. If you have any transferring to do, now is the time to do it. Have a queen of some kind in every hive, under no circumstances allowing a colony to be idling away their time because it has no queen. A black or hybrid queen is better than none at all, for we want eggs laid every day, and every night too, for that matter. If you can have a good prolific queen in every hive, of course it is better; but a poor queen is better than no queen. If you have on hand a stock of empty combs, get them into use before the moth-worms come to make havoc with them. If these empty combs contain also stores of honey, all the better, even if the honey came from hives where the bees died of dysentery. It will do no harm now; in fact, it has been pretty well demonstrated by repeated experiments, that honey that will produce dysentery among bees one season may not do so another. Be sure that the queen has room. They may fill all their combs with brood and honey from fruit-bloom, almost before you know it. Never say, "Why, I looked at them only day before yesterday, and I didn't think it possible they could occupy all the room in so short a time as this." If your bees swarm during this month, rejoice. If they keep building up and don't swarm, rejoice more. Be sure to be ready for whatever may happen. Have a hive or two all ready, fixed to hive the swarms in at a minute's warning, and do this before you have any idea that the swarms may come out. Have every thing necessary for the care of surplus honey in readiness in the same way; that is, have every thing all ready before you think it possible it can be needed.

One great secret of success in having work with bees, work on the farm, or any other kind of work go along briskly and profitably is in anticipating what you may need before you come to it; and when the time actually comes, in having all ready to go right along. Have extra tools and extra implements of all kinds as far as possible, so that if one won't work, or is borrowed, you won't have to stop work. Be wide awake in all things, and "whatsoever thy hand findeth to do, do it with all thy might."

I do not know all of you, my friends, but let me give you this piece of advice here: If you want to succeed as a bee-keeper, be up before five o'clock every morning at this season of the year; and if you get tired out by nine o'clock, go to bed by nine o'clock, and be ready to get up *next* morning. Whenever the bees are at work, you are at work, and out among them.

Rainy days are sure to come, and therefore it behooves you to have some work laid out for such days. Don't be spending your time on nice sunshiny days at indoor work, and then find yourself prevented from doing necessary outdoor work when it rains. Do your indoor work rainy days and evenings; and when the sunshiny days come, make the most of them.

TO MAKE NATURAL SWARMING MORE CONVENIENT.

SOMETHING FROM FRIEND KENDEL ON THE SUBJECT.

VERY often when swarms issue it is more or less windy. At such times bees will fly about vainly trying to find a steady place to cluster; and at such times they will take most kindly to a grape-post or some other unpleasant place which can not be shaken. Noticing this I planted small trees, trimmed them up to a convenient height, say 4 to 6 feet, cut the branches short to make a solid head, and then drove three sticks firmly into the ground, some three feet from the stem, and tied the upper ends firmly among the branches; this secures the tree or shrub firmly against any breeze, and bees cluster most readily. Get a few young peach-trees and try it. I keep a hive under the tree all ready for occupancy, with fdn. or empty combs; this may also be an attraction; but certain it is, that although my 25 swarms stand in my garden of 40x100 feet, it is very seldom that one clusters over the fence, and I have always practiced natural swarming.

Their tendency to cluster where previous ones have been, also helps in this plan. I always have a short-handled swarming-box ready, into which, with one shake, the bulk of the cluster falls. When these are poured in front of the hive, and the swarming-tree kept slightly in motion, the whole community will readily cluster, or, rather, run, into the hive in an incredibly short time, particularly when a frame of brood has previously been hung in.

Cleveland, O., March 27, 1883. A. C. Kendel.

STATISTICS OF BEES AND HONEY FOR THE UNITED STATES.

THE RESULT OF FRIEND MILLER'S LABORS.

We take pleasure in giving the following as the summing-up of the reports that have been sent in for months past in response to the calls through the various journals. This report was first put in print by the *American Bee Journal*, it may be well to explain.

Many of those who reported sent in only part of the items asked for, in some cases omitting the spring count, in others the fall count, especially of 1881. This will explain such discrepancies as, a positive gain in wintering, the apparent decrease for 1882 in Minnesota, and the enormous increase in Maryland, etc. These defective reports might have been safely modified by assuming a fall count at least equal to the spring count, and assuming a spring count bearing at least a small proportion to the fall count, and the items of some of the States might have been largely increased by incorporating reports obtained from other sources; but it is, perhaps, best to give exactly what was sent in, in response to the call; neither adding to nor subtracting therefrom. It will be noticed that the largest numbers are reported for Illinois. It does not necessarily follow that Illinois has more honey than any other State. Possibly a good year in Illinois made more bee-keepers of that State willing to send in their reports. A bad honey crop in New York probably accounts for that State being sixth on the list as to number of persons reported. New York, however, stands second on the list as to spring count reported, showing that those reported from this State own a large number of colonies as compared with other States.

The average number of colonies reported for each apiary are:—

Fall of 1881	20.1
Spring of 1882	35 5
Fall of 1882	35 4

The average number of pounds of honey produced by each person is:—

Comb honey	628
Extracted	616
Total	1244

The average number of pounds per colony:—

Comb honey	30.58
Extracted	30.00
Total	60.58

Thanks are due to many, whom it would be a pleasure to name did space permit, for the pains taken in sending in reports for others. As has been suggested, Illinois makes the largest reports. On page 51 of *Bee Journal*, is a table by counties for the State of Illinois of the honey crop of 1881, given at 618,947 pounds, and the total number of colonies (pre-

STATES.	No. of Persons Reported	No. of Colonies in Fall, 1881.	No. of Colonies in Spring, 1882.	No. of Colonies in fall, 1882.	Per cent of Increase.	Honey in the Comb.	Extracted Honey.	Total Surplus Honey.	Average per Colony.	Beeswax.
Arkansas	5	105	104	215	107	6 925	2,992	9,917	96	97
Canada	23	457	445	644	45	3.722	12.644	16,366	37	82
California	5	351	282	419	49	1,700	13,350	15,050	53	55
Colorado	2	2	12	35	192	290	175	465	39	3
Connecticut	3	23	24	49	104	425	841	1,266	53	9
Dakota	24	203	212	386	82	10.176	276	10,452	49	37
Florida	3	83	73	149	104	1,215	6,939	8,154	112	29
Georgia	1	19	18	42	133	....	50	50	3	4
Illinois	252	5,160	5,774	10,7 2	86	314,263	283,737	598,000	104	2,768
Indiana	116	2.058	1,911	3.437	80	33.673	45.484	79.157	41	704
Iowa	216	2,828	3,096	6,902	123	140 904	144,883	285.787	92	1,443
Kansas	24	299	352	476	35	7,593	11,011	18 604	53	122
Kentucky	34	642	714	1,195	67	6,345	4,765	11,110	16	87
Louisiana	2	98	90	132	47	50	4,200	4,250	47	....
Maine	134	1,840	1,325	1,971	49	18.000	3.440	21.440	16	10
Massachusetts	9	141	123	170	38	885	2,470	3,3 5	27	39
Maryland	24	67	63	595	844	1.034	1,418	2,452	39	35
Michigan	151	3.308	3,187	6,024	89	120,291	63,103	183,394	58	24
Minnesota	16	492	730	639	14	20.773	12,924	33.697	46	167
Mississippi	2	103	92	164	78	200	4,800	5.000	54	75
Missouri	34	611	595	1,087	82	18,548	29,654	48 202	81	178
Nebraska	15	137	134	583	335	6,385	8,460	14,845	111	39
New Hampshire	2	....	82	115	40	80	....	80	1	50
New Jersey	11	246	237	332	40	2.696	4.818	7,514	32	49
New York	123	4,041	3,917	5.281	135	88,930	44,583	133.513	34	1,335
North Carolina	2	44	44	94	114	250	1,450	1,700	39	27
Ohio	124	2,122	2,019	3,375	62	34.619	36,183	70,802	35	565
Oregon	3	67	63	89	41	155	1.865	2,020	32	6
Pennsylvania	73	1,370	1,660	2,362	42	51,740	19.033	73.773	44	488
South Carolina	2	27	26	52	100	885	2,527	3.412	131	15
Tennessee	3	236	251	372	48	3.100	4,000	7,100	28	25
Texas	27	960	843	1,661	97	3,559	45,759	49.318	59	630
Utah	23	186	175	271	55	5.100	4,442	9,542	55	55
Vermont	18	361	375	554	48	5.840	2.655	8,495	23	129
Virginia	4	155	131	213	63	2,090	4,200	6,290	48	18
West Virginia	5	160	151	205	36	724	4.755	5.479	36	33
Wisconsin	56	2,648	2,936	4 556	55	70.538	134,255	204 793	70	1.078
Total	1571	31,653	32,266	55,578	72	986,703	968,141	1,954,844	61	10,410

sumably spring count) for 1882, given at 86,633. These figures have been gathered by law by the assessors of the various townships, perhaps the only instance of official State reports of this kind ever published in the bee papers.

There are reasons for believing that these figures are below the mark, and yet the spring count for Illinois, in the present table, must be multiplied by 15 to make it equal the assessor's reports. After multiplying reports from other States by 2, 5, 10, or 20 to bring them on a level with Illinois, then multiplying again by 15 we may get at something like the truth.

C. C. MILLER,
Chairman Statistical Com.
April, 1883.

KEEPING UP BROOD-REARING DURING A DEARTH OF HONEY.

SOME IMPORTANT FACTS IN THE MATTER.

FRIEND ROOT:—I have been keeping bees for the past thirteen years. The last ten it has been my principal business. I had 240 colonies last fall; lost but one in wintering, probably smothered. My crop of last season was 10,000 lbs., 7000 of which was comb honey. I am aware that this is by no means a large yield for the number of colonies; but when account is taken of the fact, that in this locality we get no clover nor basswood honey, it may be considered a fair crop.

And now I have a few thoughts to present to the readers of GLEANINGS, upon a point which I believe bee journals have not overdone. In this place, as a rule, we get no surplus honey until about the first of August. I presume the same is true of a large part of Southern Illinois, as well as in many of the recently settled localities of the West.

Our colonies get strong enough by the middle of May to swarm, at about which time our spring bloom fails, then for six weeks or more these large colonies of bees have to depend mainly on their rapidly diminishing stores. In small or moderate-sized hives they often run out of honey, and cease to raise brood, and even throw out the uncapped larvæ. Not a great many colonies die of starvation; but if left to themselves they are very weak at the beginning of the honey season. By noting the time that elapses between the commencing of brood-rearing in the spring, and the gathering of the first surplus honey in August, it will be seen that a good part of their spring stores are consumed in the rearing and feeding of bees that will finally die of old age before they have had an opportunity to gather a pound of surplus.

Just how to remedy the difficulty under which we labor is therefore an important question. The most obvious and immediately helpful remedy for starving bees is generous feeding. For summer feeding I have found grape or corn sugar, placed on top of the frames, the most economical and convenient article. Another remedy, not so immediately active, but likely to be more permanently helpful, is a liberal sowing of white-clover seed in pastures and roadsides in your neighborhood. I am expecting that my house apiary will receive some benefit from this treatment the present season.

Now, friend Root, I very well know what remedy you would prescribe for the case in hand. It would be to sell the surplus bees by the pound, instead of buying sugar for them. I tried this plan last season, but my advertisement has not resulted in the sale of a single pound of bees. So I concluded that this remedy, while very pleasant to take, can not be depended upon for general use, though I intend trying it once more.

There is another remedy for the difficulty, that suggests itself to my mind, though I have not yet fairly tested it, and it is the one of which I wish particularly to speak. It is to retard brood-rearing in the spring by confining the queen to about two frames, until near the close of our dearth of honey, and thus save the queen from unnecessary exhaustion, and the stores from being consumed in rearing and feeding of useless bees.

I believe that division-boards that will only permit bees to pass under them will be sufficient to keep the queen at her place. If not, the perforated metal plates certainly would. I expect to try this retarding process in my Clay county apiary, and to some extent in my home apiary.

Farina, Fayette Co., Ill. T. P. ANDREWS.

Thank you, friend A. I should by all means try to avoid loss during the months you mention. And were it not for the time it takes to get clover started, I should by all means advise the clover, as clover honey stands at the head of all honies. While waiting for the clover to grow, I should by all means feed; and for feed in the fore part of the season, under the circumstances you mention, I am inclined to think I should use the much-abused grape sugar. Where a poor quality of maple sugar can be bought for 7 or 8 cts. per lb., perhaps that might answer just as well. I presume you have not yet *built up* a trade in bees by the pound. With us this trade has assumed such proportions that we can hardly keep a pound of bees in the hive; and even on this 17th day of April, if we filled our orders we should hardly have a bee left. By all means keep them going by some means or other.

FOUL BROOD.

ARE WE FULLY AWARE OF THE DANGER THAT THREATENS US ALL?

THE inclosed card of Prof. Cook speaks for itself. Please publish it in your next number of GLEANINGS. I expect to be convinced of the fact, that brother Jones never had foul brood in his apiary, otherwise one of his boys would never be able (or have been able) to cure his colonies in such an easy manner. Brother Jones would have an abundance of foul brood now, which, indeed, would be equal to a calamity to the interest of bee-keepers in this country. I hope brother Jones will be spared.

But he was honest in his belief that he had foul brood. There are no two ways about it. I am sorry that Prof. Cook can not give a fair test of the matter. Unless our friends are aware of the insidious character of that disease, foul brood will keep spreading in this country, slowly but surely. Earnest and scientific men in the old country have devoted much time and labor to the matter, without being able to arrest the progress of the disease, and we who have it in our power yet to arrest the spread are indifferent, consoling ourselves with the idea that little boys can finish that job. I wish, indeed, you could name some good reliable party who could give us some facts, substantiated by his own scientific tests in this matter. It might serve greatly toward putting our friends on their guard, and to arrest the spread of foul brood, which is in its infancy yet in this country. CHAS. F. MUTH.

Cincinnati, O., Apr. 13, 1883.

Below is the card alluded to: —

Dear Mr. Muth:—I must refuse to receive the foul brood. It is within 30 miles of us. Should I bring a hive here, and then foul brood should appear around us, as it may at any time, I and the College would suffer, even though I was so careful that no spread from the colony sent me was possible. Practically, it makes no difference. I can go to it.

Lansing, Mich., April 11, 1883. A. J. COOK.

FOUL BROOD, AGAIN.

AND SOMETHING A LITTLE MORE ENCOURAGING.

ON page 171, Vol. XI. of GLEANINGS, Mr. Muth appears to have but little faith in Mr. Jones's method of curing foul brood, and has made a wager of $50.00 that Prof. Cook can not succeed in curing a diseased colony under Mr. J.'s instructions. Mr. Muth may as well draw his check in favor of his contestant, and become a convert to modern methods of treatment. More than 500 cases of foul brood have been cured in this vicinity within the past five years. The German remedy in the application of salicylic acid, as well as Mr. Muth's modified treatment, were given a most careful test by several of our apiarians here in 1877. But little benefit was derived, and those methods were abandoned. Our method of cure has been in substance the same as described by Mr. J. S. Harbison in GLEANINGS, p. 337, Vol. IX.; by Mr. G. M. Doolittle, same number, and by Mr. D. A. Jones, p. 535, Vol X. I have cured about 125 cases in my own apiary. Last season not a sign of the disease was observed, and but one affected colony the year previous. Some of my neighbors have been equally successful.

Now, Mr. M. may say that we had a mild type of the disease. Well, we had cases which would have made Mr. Muth apply a clothes-pin to his nasal organ were he present; if that be mild, we want no further introduction. Mr. M. has, for several years, been an earnest advocate of the use of salicylic acid as a remedy, and in so doing has favored the spread of this infection, in the writer's opinion. Why be so incredulous when he has had the above authorities and others besides? We hope to see Mr. Muth take a new position upon this subject, after paying so dearly for his knowledge. But should he still continue skeptical we should be most happy to give him from one to five hundred dollars' worth of additional information on the same safe terms.

When there is honey in the fields, I prefer caging the queen in the infected colony *in the morning*, using a small wire cage. Place the caged queen between the combs of her hive. About sunset, *brush* the bees from the combs into a clean hive having a few empty frames. Brush them off as quickly as possible, that they may have but little opportunity to take the diseased honey with them. Suspend the cage to one of the middle frames, and leave the entrance of hive open. In four or five days transfer the bees rapidly to clean hive, using comb fdn., and release the queen. *Give no empty combs* for a few days, and there will be no further trouble. The starving process is equally effective when properly conducted.

In all operations upon diseased stocks we would most strongly enjoin the greatest caution in promptly scalding hives, frames, combs, brushes, cages, knives, etc., used. Since there are so many careless bee-keepers, as well as those who are entirely unacquainted with foul brood, and others who will not believe it contagious, we think each State should afford the bee-keeper security in his property by the passage of appropriate laws. Our State legislature has recently enacted the following law:

AN ACT.

To authorize the Boards of Supervisors of the several counties of this State to appoint inspectors of apiaries, and provide for their compensation, and defining their duties, and for the further protection of bee culture.

The People of the State of California represented in Senate and Assembly, do enact as follows:

SECTION 1. The Board of Supervisors of any county wherein bees are kept, are hereby authorized to apoint one or more persons as Inspectors of apiaries, to hold office during pleasure of said Board.

SEC. 2. The Board of Supervisors shall fix and determine the compensation of the Inspectors of apiaries, to be paid out of the funds of the county not otherwise appropriated.

SEC. 3. Upon complaint being made to the Inspector, to the effect that in complainant's opinion, the disease known as "foul brood" exists in any apiary in that county, it shall be the duty of such Inspector to inspect such apiary as soon as practicable, and direct the person in charge thereof to destroy all hives ascertained to be so affected, together with the combs and bees therein, by burning or burying the same in the ground the following night.

SEC. 4. If the owner or person in charge of an apiary, by his own inspection or through any other source, discovers foul brood in any hive in said apiary, it shall be his duty to destroy such hive and contents in the manner provided in section three of this Act.

SEC. 5. Any person failing to comply with the provisions of the last section shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than five dollars nor more than twenty-five dollars for the first offense, and by a fine of not more than fifty dollars for each subsequent offense.

SEC. 6. This Act shall take effect from and after its passage.

San Bernardino, Cal., Apr. 10, 1883. M. SEGARS.

BEE-KEEPING FOR WOMEN.

OUR GOOD FRIEND MRS. HARRISON HAS SOMETHING FURTHER TO SAY ON THE MATTER.

I HAVE enjoyed the discussions that have been in GLEANINGS with reference to bee-keeping being a suitable employment for women, and have no doubt but that it will be promotive of much good. Supply dealers will put upon the market light and easily adjusted fixtures, especially adapted for persons of little strength. I claim this much for women: although they may be lacking in physical strength, they are "brainy," plenty; and as for courage and endurance, they would outrank the other sex every time. There is one side to this discussion that is overlooked by those who advocate that it is "too hard for women," and that is, what have they to give us in lieu of bee-keeping? It is like the infidel who would take away the Bible, but have nothing to give in place of it.

Something that women can do at home, which has a money value, is sought for the world over by those endeavoring to elevate the sex. We might raise silkworms, and have no trees to climb to take them down, or heavy hives to carry; but would it be any easier, to be up all night feeding worms? Honey is heavier to carry than cocoons, and so is the money for it. I know it is difficult to hive colonies clustered on stumps, rail fences, and in lofty forest-trees, as the sisters Linswik have done. Others differently situated have fewer obstacles to contend against. We have a honeysuckle and wisteria that are supported by large sassafras-trees that had the tops cut off, and set in the ground like posts. When bees cluster there it is almost as much as they are worth to hive them. Early May cherry-trees have been the most popular clustering-place for our bees, and they are low.

Persons have to be governed by their surroundings in keeping bees. If I lived in the country, I should manage quite differently than I do here in the city, where I have to guard against making them cross. I should not be writing this moment, if workingmen were not laying pavement near, for it is a warm still day, and I want to open hives. I've noticed that beer-drinkers, and those who use tobacco, are more apt to be stung than other persons.

HONEY VINEGAR.

Will some of the sisters "Bee" give their experience in making honey vinegar? What I've made has a peculiar taste. I can not disguise it in any shape, so that my family will not know it. "More of that honey vinegar, hey? wish you would throw it out. Plenty of apples in Illinois to make vinegar out of." MRS. L. HARRISON.

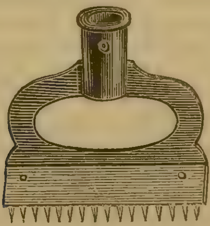
Peoria, Ill., April, 1883.

Thank you, Mrs. H. There is certainly much truth in what you say about occupations for women. I don't know about silkworms, and they may be all right; but I do know that many of our feminine friends keep bees, and make money at it; and the best part of it is, that they enjoy excellent health, and are happy in their work. Any work may be hard work; and especially is the work hard when the heart is not in it. You have given us something on honey vinegar a little on the other side, my friend. Has any one else had any such experience?

FASTENING FDN. INTO THE WIRED FRAMES.

STILL ANOTHER WAY.

WE have just had a very pleasant visit from friend McGee, of Marblehead Point, O. A little sketch of his bee-keeping is mentioned on page 259. Well, among other things that we learned from friend McGee was a plan for putting fdn. into the wired frames, which we think is going to do entirely away with the button-hook, or soldering-iron arrangement. It is simply a common carpet-stretcher, as shown in the accompanying cut.



IMPLEMENT FOR FASTENING FDN. INTO THE WIRED FRAMES.

No lamp or heating is required. The fdn. is laid on the wires, with the wax at ordinary temperature. Of course, the work should be done in a room ordinarily warm. To imbed the wires into the wax, you have only to lay the points of the carpet-stretcher on the wire, and press it down firmly, the fdn., of course, being supported on a board in the usual way. The width of the carpet-stretcher is such that pressing down twice fastens the wire the whole length, and one who is a little accustomed to the work will do it even more rapidly than with the heated copper, as we have been doing it. A short handle on it, not shown in the cut, is used. These carpet-stretchers can be furnished for 15 cts. each, handle and all. If sent by mail, 25 cts. Many thanks to friend McGee. The wire is so thin that the pressure makes it cut its way clear down to the center of the sheet of wax. The points touch it at short intervals in such a way that few if any of the walls of the cells are injured; and friend McGee assures us that drone-cells are never built on the wires, which is sometimes the case with almost all other methods of imbedding the wires into the wax sheets. We think frames of fdn. put up in this way will ship even more safely than the way we have been doing it.

HOW TO MAKE A CUT-OFF SAW-TABLE.

ALSO SOMETHING IN REGARD TO THE MATTER IN GENERAL OF CUTTING OFF BOARDS.

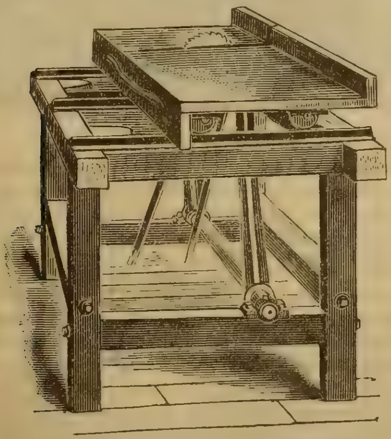
IT will be remembered that in the A B C book we described minutely buzz-saws and buzz-saw tables for ripping lumber. We also told how saws were made, and filed for cutting off lumber. Now, where the bee-keeper has but little to do in the way of hive-making he may cut boards on the same table that he uses for ripping. The usual method for doing this is to place the board on the figure 4, according to A B C, and as seen on page 583 of GLEANINGS for Dec., 1882. But in order to work this way, he must have somebody to hold the end of the long boards while he cuts them up, or have some sort of a support on which they will slide over easily.

When I used to make all my own hives with a single saw-table, and my saws were run by a windmill, as some of you may remember, I used to have the further end of the board slide on a smooth rest made of a piece of hard wood. With this I could take a 16-foot board, and, without any assistance, cut it up into pieces long enough for hives or covers, and have them so exact that, when piled up, no difference in the length could be told by passing the fingers over the ends. Now, while I could do this day after day, and really enjoy the work, I could not find any one who would do it for me. If I set a couple of boys at it, the one with the other end of the board would move it too fast or too slow, or by jerks, in such a way as to have the pieces, when cut off, of unequal lengths. Then we tried cutting the board up first into pieces long enough for two or three lengths for hives; and then as these pieces were short enough to handle, it was an easy matter to cut them up into exact lengths. This, of course, took a great deal more time; and even then the boards would not be cut squarely across. The reason was, that although the edge of the board might be held closely up against the figure four, unless at least one side of the board was perfectly straight, like a straight-edge, before being cut up, we found trouble after we got through.

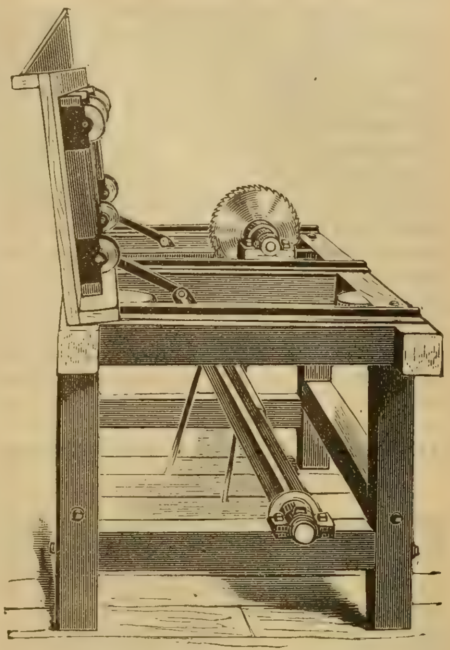
There is a way, however, in which a board can be cut up into accurate lengths, even if its sides are not straight. Fix a straight-edge of steel (nice hard wood may do) back of the saw just far enough away to get the length of board wanted. Hold it hard up against your figure 4 and cut off a board once, squarely across. When you have done this, hold the square cut hard up against the steel straight-edge. Now push the board along on the top of the table up against the saw, watching carefully to see that the end is a perfect fit against this steel straight-edge. In this way you can cut up a whole board and have the pieces exactly of the same length. But woe betide you if you are so careless as to leave a crack on either edge, even if it be not more than a hair in thickness. You see, we want the boards so accurate that where there are two stood up together on a smooth surface, neither eye nor finger can detect any difference in the length. In making frames for the hives, this is a most important matter; indeed, I have had nothing in the whole department of hive-making that has caused me so much trouble as this matter of getting hands who would cut stuff *perfectly accurate*. Many times I could have cried about it (if you will excuse a little exaggeration), had I thought it would do any good.

We are now ready to consider what may be done by the use of machinery, for enabling even unskillful hands, or, perhaps, hands who have never been shown the importance of accuracy in mechanical work, so that they may do work and be exact. When at the Exposition at Cincinnati, last fall, I saw some beautiful iron tables having a pair of saws. These saws could be adjusted at any required distance from each other; and to cut off the board it was pushed against the saws while moving on a carriage of iron. This, you will see, made it next to impossible to have boards cut either too short or too long; but the two cuts every time, made a small waste of lumber.

Below we give you some engravings of the cut-off tables we use in our own factory. I don't know whether exactly the same device has ever been used before or not.



A SAW-TABLE FOR CUTTING OFF STUFF.



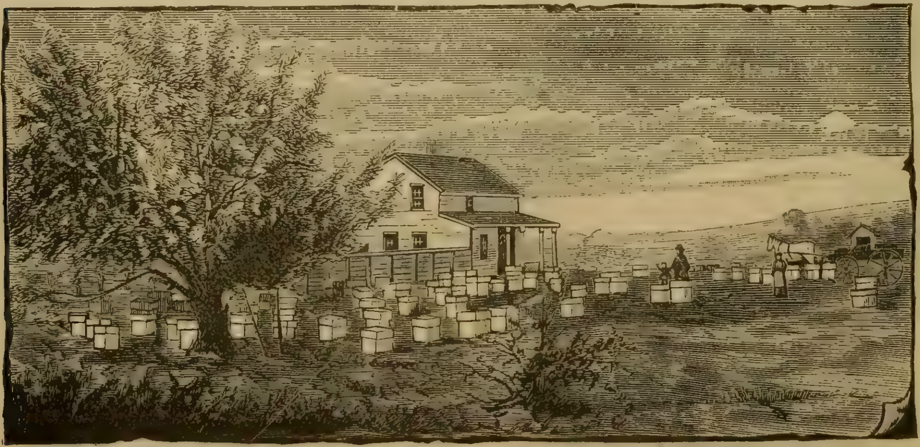
THE SAME WITH TOP RAISED.

No. 1 shows the table ready for work, and No. 2 the same with top elevated, which can readily be done to take off saws, etc. It occurs to me just now that our artist has made a mistake, and drawn a rip-saw where he should have shown a cut-off or cross-cut saw, as it is sometimes called. The table is made of 4x4 seasoned maple. On the top are placed three cast-iron V-shaped tracks. The sliding top runs on these tracks on 6 cast-iron wheels having a V-shaped groove in each. This, you will observe, makes the sliding top of the table so that it moves to and fro with great ease, yet without a bit of end shake. At a first glance one would almost think this sufficient; but if you were to lay a 16-foot plank on this sliding table-top, and take hold of the end, you would find it would have a considerable twist, or "wiggle," on its center. This twist would, of course, prevent cutting off the boards accurately. Now to make the table rigid where it stands, and still bear sliding to and fro, we have what is termed a rocking-shaft. This is a cast-iron shaft about 2½ inches in diameter. Don't make it any smaller, thinking it will do. Better have it larger, if any thing. On this shaft is a pair of rigid cast-iron arms, as you see in the cut. At the top of each of these arms, short iron bars are bolted; and these bolts are attached to the movable table-top. Now, providing these bolts all work closely, we have secured our table so that no twist is possible, unless the shaft should twist. But a 2½ iron shaft can not be expected to do this very much. A handle is attached to the sliding top, as you will see in the cut, for drawing it back easily. We have two of these tables in use —one about 10 feet long, and the other about 8, and they are in use almost constantly. Of course, an iron gauge which can be adjusted at any required distance from the saw is a great help for cutting different lengths of lumber. And as before, your stuff *must be* held *tight up* to this gauge. Such a table, well made, ought to cost perhaps $45.00 for the short ones, or $50.00 for the long ones, as described above. If made as we have directed, it should, with a mandrel of proper size, be capable of carrying a 12 or 14 inch saw, and should cut up heavy planks used for chaff-hive corners, or such as will be required for slicing up wood into separators, or any similar work. Where inch boards are to be cut, or any thing thinner, we pile them up until we get as many as the saw will reach through. By this means we cut three or four, or even more, where the lumber is thin, at one cut, and one person handles it all easily.

FACTS AND FALLACIES IN APICULTURE.

FRIEND WILTSE'S APIARY, ETC.

TO take the photograph, a team was driven some 20 feet back of the small apple-tree in the foreground that obstructs the view of a few of the near hives, and the artist placed himself in the wagon, facing his instrument toward the house. It was at 4 o'clock P.M., on the 26th of October. Not a breath of air was stirring. A patch of spring rape near the ravine had withstood the effects of a temperature of 24° on the morning of the 18th, and was still furnishing honey. The bees were flying briskly.



APIARY AND RESIDENCE OF JEROME WILTSE.

We had been uniting queenless stocks of bees with those having queens, and setting the empty hives at the front, and, as a consequence, open spaces are left, and the apiary has a straggling appearance. The blue-grass, with which the ground is covered, obstructed the view of the entrances, and the bees do not show. The hives near the trees, though beyond the extreme limits of the limbs, appear to be under them. Everything appears to be depressed in height, and extended in width. In other respects the appearances are right.

The apiary is located three and a half miles west of the Missouri River, and five and a half north of the Kansas line. A five-acre patch of land, 40 rods east and west, and 20 rods north and south, is inclosed with an osage-orange hedge. Eight rows of apple-trees are planted across the west end of the patch (two of the trees show in the photograph), and six rows extend along the north side some rods beyond the house. Beyond these, in the north-east corner, is a vineyard containing 600 vines. The apiary is on the south half of the patch, south of the center. At the north-east is the house, and on the east a dozen or more cherry-trees. A tight board fence is on the north side. In the distance, on the north-east and east, are two rows of forest-trees along two water-courses. Several other water-courses, skirted by timber, are within the bees' range of flight. The ground on which the apiary is located descends slightly to the south-west. The fence and the trees check the force of the winds from all sides but the south. No shade is provided for the bees.

THE HONEY-PRODUCING TREES AND PLANTS OF NEBRASKA.

We can reasonably expect surplus honey from basswood, from the 5th of June to the 10th of July; from English smartweed, from the 8th of August to the 10th of September; from buckwheat, from six weeks after it is sown to the time it gets ripe. We may hope for honey in limited quantity from alsike clover, from May 15th to June 10th; from sumac (*Rhus glabra*), from June 12th to July; from sumac (*R. Capillina*), from July 15th to August. When all the conditions are right, nearly all kinds of trees and many kinds of plants furnish light flows of honey; and nearly all furnish pollen. Without one or more of the above-mentioned trees or plants in abundance, and enough other trees and plants from which honey and pollen can reasonably be expected to furnish the necessary food continuously, or nearly so, within the range of flight of the bees of an apiary, it is useless to station in this section of country. The following incomplete list of the more important trees and plants for the last three years, given in the table below, will give a correct idea of how atmospheric changes have affected the trees and plants of the country.

COMPARATIVE TIME OF BLOSSOMING, FOR THREE YEARS.

Names of Trees and Plants, and what they Produced.

1880.—March 3, hazel; pollen. 25, maple; honey and pollen.
April 2, white-willow; honey and pollen. 18, apple, plum, June-berry, cottonwood; honey and pollen. 20, red-bud; honey and pollen. 27, oak; pollen.

May 6, wild-cherry; honey. 8, black-locust; nothing. 12, red-willow; honey and pollen. 16, red, white, and alsike clover; honey. 23, wild-grape, honey. 27, dogwood; honey and pollen.
June 9, sumac; honey and pollen. 16, basswood; honey.
July 15, sumac; honey and pollen.
Aug. 8, English smartweed; honey and pollen.

1881.—Apr. 16, hazel; pollen, the first of the season. 20, white-willow, red-elm, maple; honey and pollen. 23, June-berry, cottonwood; honey and pollen.
May 15, wild-cherry and black-haw; honey and pollen. 18, black-locust; nothing. 23, red, white, and alsike clover; honey.
June 13, sumac; honey and pollen. 15, basswood; honey.
July 13, sumac; honey and pollen.
Aug. 28, English smartweed; honey and pollen.

1882.—March 1, hazel; pollen. Maple; pollen and honey. 14, red-elm; honey and pollen. 23, white-willow; honey and pollen.
April 3, cottonwood, plum; honey and pollen. 7, apple, cherry, honey and pollen. 9, June-berry, red-bud; honey and pollen.
May 2, red-willow, gooseberry; honey and pollen. 4, oak; honey and pollen. 6, wild-cherry; honey. 19, white, red, and alsike clover; honey. 31, blackberries; honey.
June 11, rape; spring honey and pollen. 21, bees starving. 23, sumac; honey and pollen. Sweet-elder, nothing. 25, basswood; honey. 30, sweet-clover; honey.
July 17, sumac; honey and pollen.
Aug. 7, English smartweed; honey and pollen.

Having ascertained that the necessary plants are within the flight of the honey-bee, should the establishment of an apiary be determined upon, the habits of the bee should be studied closely, with a view to choosing a site where it would be encouraged to develop its habits to the fullest extent, and be protected from the cold winds.

Falls City, Neb. JEROME WILTSE.

Ladies' Department.

AN A B C SCHOLAR'S LETTER.

ALSO SOME GRAINS OF WISDOM FOR VETERANS.

MY bees have all wintered nicely, notwithstanding the severity of the winter. They were on summer stands, with chaff cushions on top of the frames, and solid sheets of honey at the sides in place of division-boards. Although they suffered badly from the dysentery during the latter part of the winter, yet they do not seem to be materially injured by it, as they are now strong and in fine condition. They are carrying in large quantities of pollen to-day.

HONEY THAT WON'T GRANULATE.

Last year's crop of honey, 1500 lbs., is all sold, and I could have sold much more if I had had it. Out of 1200 lbs. extracted, I had only about 15 lbs. that granulated, and that was basswood honey taken in July. We did not put any of our honey in barrels last year, neither did I strain any of it.

STRAINING HONEY.

I consider straining honey unnecessary labor. On extracting, our honey was put into large tin cans (such as are generally used for lard), and kept in a warm room for a few hours, when all impurities would arise to the top, and were easily skimmed off. The small amount of honey skimmed from the cans, and that with the cappings, was used for making vinegar. If I were going to barrel my honey, I think I should save both time and labor by skimming rather than straining it.

DEVELOPING THE HONEY MARKET.

With the exception of about 400 lbs., our honey was all sold in or near our own town, mostly in bulk, as the purchasers generally prefer to furnish the vessel to be filled. With the little experience that I have had in selling honey, I think the best way is to sell from samples, never handling the honey except to deliver it.

HANGING OUT, AND THE REMEDY.

While reading GLEANINGS I see a good many complain of their bees lying out in summer. I think this is more frequently caused by their being in need of room to store honey, than from a lack of ventilation, as many seem to think. I noticed during the past season that when a colony was found lying out (if for a single day only), on examination they were invariably found in need of more room; and by the frequent use of the extractor, and by removing the surplus boxes as soon as filled, replacing them with empty ones, our bees were kept busily at work during the entire season, regardless of the heat, notwithstanding a part of them were very poorly shaded.

RAISING HONEY-PLANTS, AND THE SATISFACTION IT GIVES.

I think with a very little care and attention any person can greatly improve the natural resources of honey in his own neighborhood. Three years ago I had to go a mile from home to find a few Simpson plants, which I transplanted to my garden, and from which I have saved seed and scattered by the roadsides and waste places, until now you can scarcely go ten rods from the house in any direction without finding an abundance of them. And not only the Simpson plant, but catnip, motherwort, etc. And now, friend Root, you can realize what a joy it is to me; how it fills my heart with gladness, to see my pets sipping the nectar from the flowers that have sprung from the seed that I have sown. If any of our friends want to see swarms of all the honey-loving insects in Christendom, just let them plant a patch of Spider plants, and I think they will be satisfied with the result of their labor.

SARAH E. DUNCAN.

Lineville, Iowa, April 7, 1883.

I am much pleased, my friend, with your closing remarks. I agree with you, that even if honey-plants do not pay in dollars and cents, they pay in the satisfaction one receives seeing the honey secreted, and the way in which the bees take it. It seems to me it would pay bee-keepers to have at least a *few* plants of the figwort and spider plants; then if they want to raise them by the acre, they will know all about how to do it.

MRS. AXTELL'S DISCLAIMER.

I was *very* sorry that I made myself so prominent that you thought I was manager of this business, in so much that you headed the articles, "The Results of One Woman's Bee-keeping." I fear our neighbors will smile a little. I do much of our writing, and most of the "blowing;" but Mr. Axtell is manager of our apiaries, farm, business, and all, and I am very glad we have got a head, for I am sure I could not carry it alone. As his health is not good, I try to help him in every way I can, as he has other duties to look after besides his own. Indeed, I do not see how a man can be a prosperous bee-keeper, if his wife doesn't take hold too, and do her share of the work; for it seems to me the work is just as well adapted to women as men.

SARAH J. W. AXTELL.

Roseville, Ill., March 5, 1883.

MAPLE SUGAR FOR BEES.

In the March No. of GLEANINGS, page 133, under heading of "Maple Sugar for Feeding," I beg leave to make a few corrections. I did not expect my report to be published, and I either did not give all the particulars about feeding, or the reporter failed to get it. That article, I judge, gives the impression that 1½ lbs. of maple sugar was all I fed, which is not true; and for fear it might mislead some A B C scholar, I wish it corrected. In February I gave each colony 2 frames of capped honey, Langstroth size; and when the frost killed the fruit-bloom, for fear brood-rearing would stop I commenced feeding each colony half a pint of syrup made of granulated sugar, daily. I continued that about a week, when my bee journal came and I saw in that a little article recommending maple sugar for feeding. I got right into the buggy, went to the city, procured 45 lbs. in cakes, gave each colony from 1½ to 2 lbs. each, which carried them through to the clover-yield of honey. I had on hand frames enough filled with comb to keep the bees busy gathering honey, and they did not have to waste any time building comb; also enough to give each new swarm a full supply; hence my success. JENNIE CULP.

Hilliard, O., April 11, 1883.

No wonder you succeeded, my friend, if you kept your bees going in that way. To be *sure*, it will pay to keep brood-rearing going. It always does.

We commenced our bee-keeping six years ago with one hive; but, thanks to the A B C book, we transferred them 3 years ago. In the summer of 1881 we got over 1000 lbs. from 8 hives, spring count; last year we got only about 850 lbs. from 13; had to feed 150 back; also 70 lbs. sugar. I have 21 hives now fixed up as snug as we could make them.

MRS. THOS. BLACK.

Heathcote, Ont., Can., Feb. 3, 1883.

THE COMING BEE.

ALSO A FEW "REMARKS" IN REGARD TO REMOVING BEES FROM CELLARS.

THIS subject has been discussed so many times that I should not touch it, were it not from the fact that I have seen it. I saw it yesterday. In fact, I saw several of them. They saw *me*, too — I mean some of them did, and the rest felt for me, and they found me. I felt them without feeling for them either. My feeling so pleased them that they called in their sisters, cousins, and aunts, to feel of me also. They came, they saw, they *felt*. I felt, too — in fact, I feel yet.

This is how I came to see,
And feel the points of the coming bee.

They were in the cellar, where they had been for only the short period of 157 days and nights, amiable, gentle Italians, as I supposed when I tucked them in their little beds in the fall. My cellar was dark. They could not see; so I suppose they had got accustomed to feeling. May be that accounts for the fellow-feeling they manifested for me. I carried out colony No. 1, *sans* hat, *sans* coat, *sans* gloves. The "coming bee" at once dawned upon my vision. She felt of my hands, felt of neck, felt of my hair, and felt of my whiskers. She sang a song in bee-sharp which attracted all her female acquaintances. They improvised a jubilee concert on the spot. I was the only interested auditor; and as soon as I could "unload my stock" I "clapped." They appreciated the cheering, and sang louder. They called in some of their finest Italian opera-singers and performers. That music is not usually understood in this country. The clapping is generally done because it is fashionable to applaud every thing that is foreign. But I understood every demi-semi-quaver. I clapped with the spirit and with the understanding also. But I felt that they were expending too much talent on such a small audience, so I retired as gracefully as the overwhelming attentions being paid me would allow.

Intermission of 15 minutes. Curtain drops.

It is usually customary for the actors to change costumes while the curtain is down. In this instance, however, the audience changed dress. The next act begins when I carry the second colony out of the cellar. This time I am prepared for the coming bee. Armed with straw hat, bee-veil, and gauntlet gloves, I look like a cross between a knight-errant, a sister of charity, and an honest granger. With my gauntlets drawn snugly around the arms with rubber cord, and the veil ditto around the neck, now let 'em sing, sang I. They sang again; and as the wind gently pressed the tarlatan against my nose, one of the foremost of the Italian singers sat down to rest on the ornamental part of my face. As I had no one to help me let go of the hive I was carrying, and as I was in somewhat of a hurry, I allowed the Italian miss to keep her seat. All at once she doubled up like a boy who has eaten too many green cucumbers; and as if afraid of falling off, she drilled my proboscis with her little gimlet. Others of her companions, hearing of her distress, came to see what was the matter, and sat down also. And as there was not sitting room on my front porch for all the sympathizing friends, some of them crowded between my veil and the place where my shirt collar ought to have been, and came up on the inside for a closer interview. By the time I had reached the yard, my neck felt as if I had undergone treatment for sore throat with counter-irritants. Then if you ever saw a cat trying to pull a mitten off its head with its fore paws, you can imagine how dignified I looked. Instead of being the audience, I was now one of the chief performers, while my wife, sitting in the bay-window, was the interested and amused spectator, enjoying the show as much as our boys did Barnum's Hippodrome. I created as much interest as a whole menagerie, when the animals had just been "stirred up." The performance lasted only about an hour, and closed amid the wildest enthusiasm.

Don't talk to me about the *Apis dorsata*. If their *gimlets* are any longer than the ones I felt, I'll be excused from buying any. Tell Jones he had better call Frank Benton home. I have lost all interest in the "coming bee." EUGENE SECOR.

Forest City, Ia., April 17, 1883.

Now, friend S., that is really too bad, for it awakens in my recollection unpleasant reminiscences, and that, too, just at an unlucky time, for you know I have been thinking much of late of having at least some of my bees in a cellar next winter. You almost make me decide to stick to chaff hives, and stronger colonies.

The "Smilery."

DON'T you think we had better speak for one corner of the "Smilery"? We can say smilingly that we have succeeded in wintering our 100 swarms of Italians without the loss of a single colony? We set them out of the cellar Apr. 3 (in the evening). None are queenless.

D. E. L'HOMMEDIEU & BRO.

Colo, Story Co., Iowa, April 7, 1883.

OUR OLD FRIEND I. R. GOOD.

WHAT HAPPENED, WHAT HE DID, AND WHERE HE IS NOW.

CHATTANOOGA, TENN., MARCH 15, 1883.

WELL, I have been to see J. H. Thornburg's apiary. It is about half way up Lookout Mountain; found him at home among the bees. He is getting ready for queen-rearing. There is considerable new honey in his hives, and drones are flying as in mid-summer. Friend T.'s apiary is on the battle-field of Lookout Mountain. He has found many relics of the war, in the shape of shells and cannon-balls. Friend T. thinks his health has improved very much since he moved to where he now is. He is consumptive. We are going to Alabama from here.

TULLAHOMA, TENN., MARCH 21, 1883.

This is a thriving town of three or four thousand inhabitants; quite a manufacturing town; from general appearance I believe it to be a good place to establish an apiary. I am thinking very strongly of locating here. I have been out to see T. A. Gunn. He lives three miles from Tullahoma; found him at home in his shop, getting ready to commence making hives and sections. He is a gentleman whom it is a pleasure to meet — full of bee talk. He keeps but few bees at present, as his time is much taken up in his shop. He thinks this is the best place for bees in the State. He has taken 100 lbs. of aster honey to the colony — comb at that.

INDIANAPOLIS, IND., MARCH 23, 1883.

Stopped to-day seven hours with our friend J. M. Brooks, Columbus, Ind. Friend B. has had splendid success wintering his bees this winter. I believe he has not lost a single colony this winter. He has been in the habit of wintering in the cellar until this winter. He thinks bees wintered in the cellar year after year are not as hardy, and will not work as well as those wintered on their summer stands. He also thinks that those beautiful light-colored Italian bees are not as good workers as the dark or leather-colored ones. He says he is not going to breed for "yaller stripes," as Judge Andrews says, any longer; but from this on is going to breed for business.

THE HOLY-LANDS FOR WINTERING.

I think I have told you before that I put about one-half, or about 115 colonies of bees in my cellar last fall, the other 110 colonies in chaff hives. In taking my bees out of the cellar a few days ago I found live bees in about 30 hives. The rest were dead, and the combs moldy and in bad shape. Out of the 225 prepared for winter in the fall, I have now remaining about 80 colonies, good, bad, and indifferent. You need not ask me what I think was the cause of the bees' dying, because, candidly, I do not know, unless it was on account of moving them last fall after cold weather.

Again the Holy-Land bees have proven themselves to be the most hardy, as the Italians are all dead except a few very weak colonies. I had about 80 colonies of Italians last fall. I have a brother who has a Holy-Land apiary of 30 colonies only 40 rods from my own apiary. He wintered his bees on their summer stands, and lost but one out of the thirty. The rest are nearly all in good condition, and very strong also.

In a letter from friend H. Alley, March 30, he says: "Have not the Holy-Land bees wintered best with you? They have with me. The Italians are the poorest race to winter we have, and I am going into Cyprian and Holy-Land bees largely." At another place he says: "I tell you, the new races will sweep the board sooner or later."

I shall not breed any Italian queens for sale this year, as I have lost all my Italian bees. If nothing happens, I think I shall be able by next spring to help furnish you early queens. We are having snow, frost, and ice here yet. Our bees have not had a smell of pollen this spring. I. R. GOOD.

Nappanee, Ind., April 9, 1883.

IS IT PROBABLE THAT BEES EVER FLY 18 MILES TO FIND A NEW HOME?

SOME CURIOUS FACTS ABOUT RUNAWAY SWARMS.

I THINK not, nor half that distance. Bees often locate in queer places. I have found them in chimneys of old forsaken houses, and even in chimneys that were used in winter; in the attic of an old building, beneath the floor; in a hollow log lying on the ground. I once followed the "bee-line" about two miles to find the swarm building comb under a rather small tree that had fallen into the crotch of another, at an angle of about 45 degrees. It had no protection, and yet had been there for months, I judge, from the amount of comb they had. One swarm was lined by a number of bee-hunters to a swamp of brushes, where there were no large trees or old logs in which the bees could find a home, and sought for in vain, till the idea popped into my brain that something had been left on the ground which furnished them a retreat. With this thought as a guide I took the trail and found them in a large rabbit-trap, or box, which some boy had set there years before and forgotten. As it was entirely filled with old comb it must have been there two or more years, sending out its new swarms.

I do not think I ever lined bees more than about three miles from their home. I once went upon a hill and caught quite a number of bees and set them at work upon the bait, and from that one spot lined five colonies to their hiding-places. But one of the five was over two miles away, and most of them were within one mile of this hill.

HOW TO TELL HOW FAR OFF YOUR BEE-TREE IS.

It is easy to determine the distance of any swarm, when you once get the bees well at work. Take some bees from near a hive, and carry them a mile away from their home. Set them at work upon their bait; and when they get well settled down to their business, take a bit of chalk and scrape a bit into your hand; moisten it, take a minute globule on the end of a small straw, or bit of grass, and touch a bee on his back, and it will stay there for days. When he starts for home, take out your watch and put down the exact time he left. When he comes back into your box, note the time of absence. Test this a number of times, and you will be surprised to see how slight a variation there is. Then strike an average, and you will get very nearly the time it takes bees to go a mile, unload, and return. You will soon learn how far away, or nearly, your swarm is. Of course they will not be twice as long in going two miles as in going one, for it takes no more time to unload in the one case than in the other, and will fly two miles while he is crawling into his tree and depositing his honey.

I have no doubt many colonies exist in these out-of-the-way places, and are overlooked because most persons look for a large hollow tree as the home of the hunted swarm, and this accounts for the fact that so many Italian queens are fertilized by black drones, when it is supposed all the colonies within two or three miles are Italianized.

Andover, Mass. L. H. SHELDON.

Many thanks for your last item, friend S. I have often guessed about how far the bees had to go in the way you indicate, but you have almost reduced it to a science.

A CIDER-MILL BUZZ-SAW.

DO WE WANT A BELT ON A HAND-POWER BUZZ SAW?

I SEE in March GLEANINGS, page 142, that H. H. Lay wants a hand-ripper. Well, I have one, only it is a cider-mill buzz-saw instead of a corn-sheller; that is, I have the wheels of an old cider-mill. I got a rod to fit the hole in the small cog-wheel and the fly-wheel, and had two journals turned in it to suit a boxing I had. I then had a screw cut on one end. I screwed one nut on, and turned it true with a file; put on the saw, and another nut against it. I have it so that, when turning with my right hand, the saw turns toward me. The small wheel turns three times to the large one once; fly-wheel weighs 25 lbs. It is 13 inches between the saw and fly-wheel, which does very well for ripping, but would have to be further for a cross-cut. I have a 12-inch saw, but think a 10-inch would do much better. I can saw my own separators, and flatter myself that they are nearly as good as yours. The saw will cut 3¾ inches. A friend gave me the old cider-mill, and the shaft that the saw is fastened to cost me 95 cents — a good deal less than $50.00, and I think it will do half as much work as a $50.00 ripper.

Tell friend Kingsley to throw his belt away and fasten the saw to the shaft that the fly-wheel is on. I have tried both ways. I make all my hives, sections, frames, and separators, and enjoy the work.

J. W. BRADLEY.

Columbia, Mo., March 24, 1883.

USING PARAFFINE WITH WAX, IN MAKING FOUNDATION.

CAN IT BE USED WITH WIRED FRAMES?

IN looking over GLEANINGS for 1882, in the June and July numbers I notice what is said about paraffine being used in wax. I *know* of a party who made fdn. to sell last season, who began by putting 5 per cent of paraffine with the wax; and before the season was over, he was putting in 20 per cent, and I used over 60 lbs. of the fdn. in my own apiary, and the bees worked out that with the most paraffine in more readily than the other. I was not troubled with sagging, but my frames are all wired, 6 wires to a Langstroth frame. I don't see why ——— and others should "get their backs up" because paraffine is used: it is certainly cleaner than wax, and what difference does it make *what* we use for fdn., if it works just as well as wax? What I knew of being used last year was not used to save money, but because it made the wax work much nicer, and the paraffine cost the same as wax.

If you want to use the above in GLEANINGS, leave out the postoffice and my name; not on my account, but it might possibly injure the manufacturer I speak of, the same as was the tendency when you spoke of its use. It is not three years yet, I believe, since I was told that a large manufacturer of fdn., "not more than a thousand miles from Medina, O.," bought a large quantity of paraffine in Toledo, perhaps to be used in coating honey-barrels. I believe you will come out ahead, if you stick to paraffine.

As a general thing I dislike to publish any thing without a full name and postoffice address appended thereto; but for reasons given above, I have decided to use this. If I am correct, there is quite a difference in the melting temperature in different brands of paraffine. Some of it will almost melt by the heat of the summer sun, while other lots have the melting temperature almost as high as wax. I can readily believe that this latter could be added to beeswax in a quantity a great as 20 per cent, and even more, without detriment, for wired frames. We purchased about a ton of paraffine several years ago, but not a pound of it (aside from my first experiments, which I have reported), has ever been used for making fdn. We use it for waxing barrels, and sell it to bee-men for the same purpose. As wax is now 35 c. or more, and paraffine as low as 20 c. in the quantity, it begins to be quite an object to have some decisive experiments in regard to the matter. Fdn. made with a small per cent of paraffine is certainly worked by the bees faster than that of pure wax.

DOES A SWARM EVER ISSUE AND GO OFF WITHOUT CLUSTERING?

AN "OLD FOGY'S" NOTION ON THE SUBJECT.

I SEE in your March No., p. 116, that Dr. S. S. Butler says he learned years ago that if the bees had room so that the whole of them could rush out they would sometimes start for parts unknown without clustering; and you, yes, you, friend R., in response to that, say, "I now recall to mind a swarm that went right out and off," etc. Now that beats me; are you sure it was a natural swarm, and did you actually see them go right out of the parent hive, and off without ever clustering, or even saying by your leave?

Now, friend R., you must excuse my skepticism on this point, for I have been acquainted with bees all my life (and I'm not a chicken by any means), and my father was a bee-keeper before me, under the old brimstone dispensation, and I have never yet in all my life seen a natural swarm come right out of the parent hive and go off without clustering; neither have I seen a man or woman who would say for certain that he or she had ever seen any thing of the kind. I have often heard people say they had seen swarms go off without "settling;" but when pinned down to the facts in the case, they invariably admitted that they didn't see them come out of the "gum," but they were in the air when they first saw them. I, too, can "recall to mind" a swarm some 45 or 50 years ago that went right out and off, and the gum didn't have a very big entrance either; but they had swarmed, and we had hived them three or four times in as many different hives, and they would come out again and settle on a tree; but this time they went right out and off, and they didn't have their "new home" picked out either, for we followed them about a mile, and they alighted on the body of a tree that had no hole in it. We didn't make any racket to bring them down or make them settle either; but we hived them again after they had clustered, and this time they stayed and did well.

I know there are still some "old-fogy" bee-keepers (?) in the country who think they have to make a "whale" of a noise to settle their bees when they swarm; but their number is growing beautifully less every year. I am aware that there are quite a number of progressive (?) bee-beepers who think it necessary to mutilate the queen by "clipping" her wing in order to save the swarm: but experience has taught me that it is unnecessary, and therefore a barbarous practice. In my experience of 35 years or more keeping bees, both on the old and new system, I have never, to my recollection, lost a swarm by absconding; but you say others have. Yes, I know it, and I have a neighbor who clips his queens' wings, and he loses two swarms and four queens to my "nary un."

Now let us read from I. Chron. 19:4. "Therefore Hanun took David's servants, and shaved them, and cut off their garments in the midst, hard by their buttocks, and sent them away." How does that strike you? OLD FOGY.

Allendale, Ill., April, 1883.

Friend F., I am sorry to say that I shall have to own up that I did not see a swarm come out and go off. The women folks saw it, or, at least, the circumstances are so direct that it seems a clear case. Now, if I am not very much mistaken, we have a score or more among our readers who have seen the first swarm come out and go off. Will such please stand up and testify? I should be very glad indeed if we could dispense with mutilating queens' wings. Friend F., did you read what our friend Cyula had to say on the subject of clipping the queens' wings, in our last number? Are you not a little uncharitable? And is not your proof a sort of negative proof? We grant that in all of your experience you never saw a swarm go off without clustering; but is such proof sufficient to maintain the strong position you take? At any rate, we should be glad to have the truth brought out again, even though the subject was discussed and dropped as settled, years ago.

WINTERING REPORT.

ARE THE CONDITIONS WE HAVE BEEN URGING, REALLY SO IMPORTANT, AFTER ALL?

I FINISHED looking over my bees last week, and am very well satisfied with the results. I have lost only two out of 150; and of the remainder, all but three are good strong swarms, many having four good frames of brood (Mar. 19). One of the swarms lost was sacrificed "in the interests of science." It was a very large swarm in the house apiary — the only one — and late in the fall left their combs and built new ones on a shelf just above their hive, right out in the open air as much as they could be when indoors. They certainly had plenty of ventilation, and I thought it a good chance to test the ventilation theory. Perhaps they would have died anyhow; but the immediate cause of their death was starvation, as they had not carried up enough honey, and it was impossible to feed them where they were, during the cold weather.

The rest were prepared for winter in a variety of ways. Fifty were in single-walled hives; 26 in chaff hives, and the rest in tenement chaff hives. Some were crowded down on seven combs by means of division-boards, and carefully packed in chaff, while some had the run of 24 L. frames, with no more protection than a chaff hive affords. Some were covered with porous coverings, though the most had enameled-cloth covers. Many had sticks or corncobs over the frames, as a substitute for Hill's device.

At the present time there does not seem to be any more difference in the results than was to be expected had all been prepared precisely alike. In some points, however, all were alike. All had plenty of bees and honey; all had winter-passages through or over the combs, with entrances full size, some swarms having entrances at each end of the hive its full width (⅜x15)

We have had a very severe winter here, the mercury frequently going down to 20° below zero, and remaining in the neighborhood of zero for weeks at a time. The fact that there was so little difference in the results seems to show that some of the conditions insisted on by many as essential to safe wintering are not at all important. If any difference appears before warm weather comes, I will report it. J. A. GREEN, 148.

Dayton, Ill., Mar. 26, 1883.

HONEY VINEGAR.

HOW TO MAKE IT.

IN response to calls for making honey vinegar last month, we have received the following letters:

R. J. Fox, in April No., asks for a recipe for making honey vinegar. Vinegar can be made from any thing that has sweet enough in it to go through the fermenting process, as cider does in changing from sweet to sour. The sweeter you make the water, the stronger will be the vinegar, if not too sweet to ferment. No yeast is required. The more it is exposed to the air, the quicker the change. A cask with the head out is the best on that account, but must be kept covered to keep out insects. If a tight barrel is used, leave the bung-hole open, and draw out a few quarts once a day, and turn it back into the barrel, remembering that the more it is exposed to the air, the sooner the change. Never allow what is called "mother" to accumulate in the barrel, as it is a growth that lives on the strength of the vinegar. Every bee-keeper who uses the extractor should have a cask to wash the cappings, and work the sweet into vinegar. L. C. WHITING.

East Saginaw, Mich., April 3, 1883.

I notice on page 192, April No., R. J. Fox wants a recipe for making honey vinegar. I have no recipe, but will tell how I have supplied my family with the very best vinegar. Four years ago I put one gallon of the best cider vinegar in a ten-gallon keg (that was during time I was extracting honey), and washed all the cappings and utensils that were used for honey, and strained into the keg, and have kept it filled up about as we used it out, since. I have not bought any vinegar for four years, and have had the very best and sharpest for use since. Keep the keg by the kitchen stove. A. S. DAVISON.

Aullville, Lafayette Co., Mo., April 5, 1883.

R. J. Fox, in April No., asks for a recipe for making honey vinegar. Here is how I make it: I sweeten water by rinsing all articles that get any honey on them, including the comb and cappings, that I intend to render into wax, and I use all honey in this way that I consider unsalable, making the water as sweet as I would if using molasses (I can not tell exactly how much honey I use to a gallon, perhaps one gallon of honey to 4 of water). I make it quite sweet, and then add mother from other vinegar-barrels, which I always have on hand. When I rack off the vinegar to sell, I save the mother in the bottom of the barrel for this purpose; and the more I put in, the better — never less than a gallon of mother to a barrel of sweetened water. Set in a warm place.

By the way, my bees (131 swarms and 2 nuclei) are all in very fine condition, only two showing any uneasiness, and they with the nuclei set too near the end of my ingress air-pipe, and they got too cold, so that their breath condensed on the honey, which soured some of it, and gave them a little touch of the dysentery, but I have cured them. I shall not take them out of cellar until maple blooms.

Mauston, Wis., April 7, 1883. H. V. TRAIN.

Let in your pure air through a sub-earth pipe, friend T., and then it won't chill those near it.

THE RESULTS OF ONE WOMAN'S BEE-KEEPING.

(*Continued from last month.*)

A SUBSTITUTE FOR GLOVES.

THE best protection for the hands I have tried is thin cloth wrapped around several times. I use one of the thin cloth flour-sacks; cut a hole for the thumb, then wrap round and round, covering the hand and wrist entirely, so that only one-half of the fingers and thumb is exposed; then pin securely, and once between first and second finger; let the pin be on top of hand. As the cloth is white and clean, bees are not angered with it; and if they try to sting through, they can not; neither is it cumbersome to the hand, and keeps the bees from getting up the sleeves.

BEE-HATS, ETC.

For a bee-hat I use for myself and girls a five-cent boy's hat, with green wire screen sewed in front, with calico curtain sewed around back and sides, and below wire cloth. I like the cloth for sides, first, because the sun in the morning and evening, shining in through the side, prevents my seeing without difficulty, sometimes; and secondly, one does not get so tanned up. For "company" hats I make the curtain long enough to come down below the waist, so as to protect the hands, then make several plaits or folds, in the back and sides, at bottom of curtain, so as to give room for arms and shoulders.

A NOVEL WAY OF MAKING ARTIFICIAL SWARMS.

Out of all three of our honey-houses, at the close of the bee work, we had to take a swarm. We knew that it seemed impossible to get the bees all out of our Timber Honey-house; but not until large sheets of nice white comb began to appear did we suspect a queen; and, indeed, I had not noticed the large cluster up in the cone of the building until it was very large, although our hand said he had. So we, Charley and I, set a hive, without bottom-board, on top of the house; fastened it there by a board, one end of which was against the hive, and the other end nailed to a post at side of house, then Charley bored two auger-holes down into the cluster below; then standing on a barrel inside, I smoked them up into the hive that had combs to receive them; cut down the combs, and saved them also. But Mr. A. had to finish the rest, which was a little more than Swede Charley and I could do, to take an enormous swarm in a bottomless hive off the top of a house.

Our honey and storage houses at home were almost solid full of honey, and we had to wait until honey was removed before we attempted the swarms in them; but by the time we got to it they had nice sheets of new comb built between the shelves, and had lengthened out the cells of honey, injuring the looks of a few sections (not many); but the way we got them out was by brushing the clusters into a pan of warm water, and skimming them out into a nucleus sitting near the door that had received bees before, and was queenless. The bees that stuck to the sections, we carried to the door and brushed off. We soon had all out, and not very many died from being wet. The queen was all right, and it is now one of our best colonies.

The honey the bees had put into the new combs built was the nicest I ever ate, so thick and waxy; the bees had not injured the sections by uncapping, but had taken out the unsealed honey; but as they found plenty of that, no harm was done. The queen was probably taken in the last-named house when we took off the racks for winter, and also the one in the storage-house, and then all the bees that came in united with her. Although we brushed out multitudes of bees, yet each day we brought in more until they were contented to stay there, and would not cluster on the screen door. At the close of the honey harvest we could not leave the wooden door open very long, as the bees outside smelled and saw the honey inside.

REMOVING THE BEES FROM THE CELLAR.

We think it pays best in our locality to keep bees in the cellar as long as we can keep them quiet in the spring, and have discarded feeding for pollen. Last spring we kept them in a few days too long, as one Saturday night they seemed very warm and uneasy, although doors and windows were open. The sun rose warm and bright, but we dared not close the doors, as they were buzzing loudly; still, we threw several pails of water around in the cellar, then got large blocks of ice and placed all around, which cooled them off somewhat by morning, so that they could be carried out. Mr. A. and hand were up by 3 o'clock, carrying out hives. Our bees seem not to mind sitting on a new stand; but we set them where we want them. A man from Iowa said that when he set out his 40 colonies in the spring, they *all* flew out and became one huge swarm, but settled. He put his hand in the cluster and saved 19 queens, I think, and the rest of the bees he put with them.

HOW TO DISPOSE OF BROKEN HONEY.

I am sorry to have written such a long letter, and am afraid you won't know how to take time to read it. A word more, and I will close. As soon as we could get time, Mr. Axtell and a hand took pans of cut-out honey, some rough and unsealed, but good honey, one afternoon, and went down to the coal bank, sold what he had for his two loads of coal, and engaged enough more to the amount of $20.00 worth, 15 and 16 cts. per lb. for the honey, and next day two other men sent word that they each wanted to sell a load of coal for honey. Our home market has greatly increased since we began keeping bees; nearly every family wants honey. We had an order for a carload, or all we had, at 14 cts. per lb. on board cars at Roseville, but we had already disposed of the bulk of it. It used to be a great study how to get rid of our honey; but now that trouble has nearly vanished, and a market is also growing for our extracted honey. Swedish people seldom use other than crushed and strained honey in Sweden.

DRONE COMBS FOR EXTRACTING.

If you are not too tired of reading this long letter, I should like to tell you how we manage the drone-combs in our extracting-hives. We have about 20 ten-comb hives which we use for extracting. We put on top 3 drone-combs, and on each side and the center fill up with worker-combs. The queens will nearly always go above, and fill the 4 worker-combs. When I want brood in a hurry, that is just the place to get it. Smoke all the bees down, and the queen will stay below long enough to fill up, and then ascend and fill the combs above; no swarming in those hives, and I can have brood all summer, and nearly always in the fall. They are not so apt to lay in them when driven down and let fill up for extracting or spring feeding.

WAX-EXTRACTING.

My work to-day has been trying out beeswax by the old process. I have been wishing I had one of the very best wax-extractors that could be made. I have always thought that I could get more and nicer wax than with an extractor, judging from the color of fdn. as compared with what I make by melting in my wash-boiler; but I nearly spoiled my new cloth shoes with wax, as the water struck a boil before I got them changed. I think it injures wax to boil; as soon as it strikes a boil I dip it out into a strainer made of a coarse towel cloth. I get the nicest of wax from the scrapings of sections, scrapings from top of brood-frames, etc., before the racks are put on in the spring. The wax rises to the top, but propolis goes to the bottom of the boiler.

THE PLASTER PLATES.

We use pressing-plates made by a man in Iowa — I forget his name. Mr. Axtell attached them to a press of his own make, so the work is done rapidly, and very thin and even foundation is made; thinner than any sample sent us by manufacturers.

ENTRANCES CLOGGED WITH ICE.

To-day Mr. A. went over to his Timber Apiary to see if things were all right; found two hives clogged with ice, probably caused by melted frost inside. We have a boy over there, engaged to keep the snow from the entrances. Since the winter that we lost 80 colonies we have been careful to remove the snow before it gets melted near the entrance, which I believe should always be kept open.

We have just weighed our beeswax, and find we have just 102 lbs., all nice bright yellow wax, and about 25 gallons of vinegar, the washings from cappings, etc., of the 4¼ barrels of extracted honey. We fed the bees more scraps, and the honey in cappings, etc., than ever a season before, for we had so much honey it seemed impossible to keep it away from them, so they got used to their daily feed, and they were not cross either. When cool weather began we had to scrape sections and pack in the house; some days we had a small swarm in the house, but they seldom stung us.

Our honey-houses were not large enough to hold all our honey. We had to put most of the large brood-combs up stairs, about 2000 lbs. in all, for next spring's feeding. Through haste and carelessness we got it to leaking — so much so it leaked through the plaster into the parlor bedroom. It was a task to remove the honey, and then we had no other place where we could well keep it from the bees (we had honey in every common room in the house), so we opened up the windows and let the bees help themselves, and they did help themselves. The most bees I ever saw in one body were in there, and the loss was but few. They cleaned up the floors nicely, and took out the unsealed cells before uncapping a great deal; but they hung around those upper windows every day they could fly afterward.

And now as I have finished my jubilee number (50 pages) I will close, bidding you good-by, and will not come again for a while. SARAH J. W. AXTELL.

Roseville, Ill., Jan., 1883.

I am very much interested, my good friend, in your account of the clustering of bees in your honey-houses. If I get the right understanding of the matter, you have demonstrated that bees will live and build comb in confinement, even during the warm weather; for, if I mistake not, these bees did not fly outdoors at all, or did they get through the openings in the roof? It seems to me this could not be; because if they did, robbers would come in through these openings. I am very anxious indeed to know if there was brood in these combs. You say they had a queen, and you say they brought honey from the unsealed sections. From this remark I inferred that they worked simply from sections up to the cluster, not getting out of doors at all. Now, if they raised brood, where did they get the pollen? or did they carry the pollen also from the combs?—The pressing-plates you mention were, we suppose, made by our friend Oliver Foster, Mt. Vernon, Iowa. I am glad to know you succeeded so well with them. You say Mr. A. made the press; do you press sheets, or are we to understand you simply pour melted wax on the plates?

Had your hives been properly ventilated from above, it hardly seems to me that the clogging of the entrances with ice could have hurt the bees. Our chaff hives are so made that the entrances may be sealed up hermetically, without any danger to the bees from want of ventilation.

No doubt you did have honey without stint, and it seems to me a kind Providence has thrown it into careful hands. And we highly commend the way in which you took so much pains to save and dispose of all the odds and ends. Most of us with such a quantity of broken honey as you mention would have felt the task almost a hopeless one of disposing of so much. I hardly think I should want to recommend your plan of cleaning honey off from the floors and the parlor bedroom. I dare say you had bees there. The reason you got along with them so peaceably was, I presume, because the bees had so large a quantity to work on, or every bee was gorged with honey, and there was but little inducement to quarrel. In fact, they were much in the same condition as when gathering natural stores from a bountiful basswood flow. May God's blessing continue to be with you and your bees, and those you employ. I feel especially like adding emphasis to this latter matter. When blessings like these are showered down upon us, let us accept them and use them as a means of doing good, and helping those by us who need help; and in no way in the world can you help so effectively as to give employment to those who need it. Your 50 pages were none too long, my friend; and indeed we should be glad of 50 more, could you combine so much valuable instruction as you have in this article. We hope you will "come again" soon.

HOW HE DID IT.

MR. HOUSE TELLS FRIEND DICKERSON HOW HE GOT 3000 LBS. OF HONEY FROM 14 COLONIES, ETC.

MR. ROOT:—I have just read in April GLEANINGS the article on page 166, and am glad to hear you have employed one who is able to answer the many questions coming from all quarters. You will confer a great favor if you will get Mr. House to answer one or a dozen questions for me, as the case may be. The question is, How did Mr. House manage his bees to get 3000 lbs. of honey from 12 or 14 swarms, and more than one new swarm from each of the old? Did he tier up for surplus? If so, how high? Did he use fdn. for surplus? If so, were they full sheets or starters? In other words, please give his management, and make it so plain that a 14-year-old boy may understand him. I am 46 years old, but a mere boy so far as a knowledge of apiculture is concerned. If you can not fix it ready for your May issue, please write direct to me on receipt of this; for if tiering up is the order of the day, I want to change my hives, as they are but 1½ story high. WILLET DICKERSON.

Ladoga, Ind., April 11, 1883.

MR. HOUSE'S REPLY.

Now really, Mr. Dickerson, you are trying to get from me something that may be hard to tell; for since the world began it has been easier by far to tell or to boast of what *has* been done than to tell just *how* 'twas done; while to tell how the same thing may be repeated would be harder still. But Mr. Root told us the other day in our noon service that we were expected to do nothing more than the best we could, so I venture.

Two years ago at Saugatuck, Mich., I lost about 50 swarms, having but four weak stocks in the spring. During the season these increased to 14 swarms; and besides furnishing enough honey for a year's supply in a large family there was thirty dollars' worth of comb honey sold. But much help was derived by the use of old combs. These 14 swarms all lived through the winter of 1881–'82; but two of them were very weak, as per page 166, April GLEANINGS. These two weak colonies were set to queen-rearing for my own use; and in raising queens I have always paid much more attention to the honey-record and non-swarming propensities of the progenitors than to their record of purity, though I had a few very fine pure queens. For the 12 strong swarms I began early, and followed a system something like that which friend Doolittle described a few years ago — keeping the bees confined by a division-board to just such space as they would *fill*, and added more room by placing empty combs in center of brood-nest.

As my queens came on I made enough nuclei to keep them, so as never to be in want of a queen when one was needed. My method of controlling swarms was a rather picked-up affair. The first and only object was to keep every honey-swarm just as strong as possible; hence I got them to working in surplus just as early as there was any chance; and when it seemed as though they could not contain themselves longer without swarming, a frame of brood was exchanged for empty comb or fdn., these frames of brood being placed in a weaker honey-swarm, if there was any such place; if not, they were put in some of the nuclei. I did not try so hard as I sometimes have, to prevent natural swarming; but rather than risk any slacking of their efforts on comb honey let them swarm, and here was a point I quite delighted in: it was to have a new swarm that came out in the forenoon be faithfully at work in upper story in the afternoon. The method was to let them have, not only the satisfaction of issuing as a new swarm, but of going into a new hive and occupying a new site. But remember this: that all but two or three of the frames of brood went from the old hive into the new one with them; generally leaving about two of the finest frames of hatching brood on the old stand for a nucleus, taking all the bees I could from old stock for the new. The result was, they not only had the fun of swarming, but they were such a *big* swarm they *had* to go into surplus. I believe that most of these swarms sent out another swarm in course of the season; but all were treated alike, and the increase was made entirely by the gradual growth of the nuclei; and when there was any surplus to be had, *there was not a swarm*, except among the nuclei, that had any excuse for *not* putting it up in good shape.

Now as to surplus: I did not use two tiers of sections, as is now becoming so common, but I used a case more like the one pictured on p. 20 of Mr. Root's price list. I don't know why I might not have used the usual method of two tiers with as much success, but I never have, and perhaps never shall. Neither did I, in any single instance, "tier up." The fact is, I did not see the time when it seemed as though I could, with profit. As fast as any thing was ready to come off I put it up in crates ready for home market or shipping. But let me say, that I think if I had been badly crowded I might have tiered up with profit.

STARTING BEES IN SECTIONS.

Perhaps I did have one point on starters. I took whole sheets of fdn. and tacked them between two thin strips as long as top-bar of frames; and during a free flow of honey would open my nuclei and drop from one to three of them into their hives, and as I kept every nucleus as strong in proportion as the honey-swarms, they could and *did* work on these sheets of fdn. most delightfully; and one of the greatest pleasures I had was to go through the apiary in the morning, and take out these sheets that were then beautiful white combs, clean and new, and drop other sheets of fdn. in their places. It was really marvelous to see how these little swarms would work out those sheets, and I was as delighted over the idea of having them help me in the way they did, as Robinson Crusoe was over some of his new plans and discoveries.

I very much prefer tacking the sheets of fdn. between two thin strips just as long as top-bar of frame, in preference to putting them in frames, because I could do it so much faster; and as these strips were lightly nailed with short brads they would come apart very easily, and leave the fdn. in good shape, with no waste. Of course, this top edge would not be worked out, but I placed the starters so that this edge would be at the bottom of the section. Then with these strips I could draw the frames nearer to the fdn. when it seemed best to economize room and save the heat of a nucleus.

These sheets of new comb I cut just as large as I could manage and get it in the section, always cutting them square, so that by dipping two sides in hot wax and rosin I could make them stick in a corner, and hardly ever had one fall. Now, if there is any thing that will induce bees to work in surplus boxes it is *new* comb; and I have never before been able to get more than a few pieces of fresh comb to use, and that was generally drone, and often contained eggs. But this was perfect; and I had an idea, too, that the "fishbone" was worked down thinner than it would have been in sections. The fdn. I used was made for use in brood-chamber; but a much thinner grade is now being made for starters in sections. I tried to have no more surplus room on a hive than was fully occupied, and often changed the positions of boxes from outside to the center, where bees were working strongest.

My honey season was a *poor* one. There was but a very light flow of clover, and I never have any basswood. There was *only* about two weeks of good honey-yield, and that was during goldenrod. But I do *think*, Mr. Dickerson, that there was a secret underlying it all that helped more than any other one thing to give me the 3000 lbs., nearly all of which was comb honey, and the 18 new swarms; and that was, that the pasture was not overstocked, there being scarcely another swarm to interfere with them. I think I am correct in this; for frequently with fifty swarms, in good honey seasons, where there were many other bees in the neighborhood, I have been unable to obtain more honey than I did from these twelve.

Now I think I have mentioned the principal items that led to any degree of success, unless it is that I have omitted to speak of the use of the extractor in the brood-chamber, a matter that should never be neglected. Whether I have made it plain enough for a 14-year-old boy, I don't know, though I guess that you can understand it. But do not fall into the error of thinking you can definitely follow the plan of some one else entirely. I believe every successful honey-raiser has a great deal of *individuality* in his method, and is obliged to have, for their circumstances are so various. Almost every action in an apiary is an *emergency*, and one must be prepared for them as a surgeon would be for "surgical emergencies."

One finds a great deal of individuality among bee-keepers that is quite astonishing in such a position as Mr. Root has given me. It's really amusing. Before me now lies a letter from Missouri from a man who wants all his frames and 500 sections *made up* and shipped to him, and wants a tin separator, bent down at each end for *each individual section*. He was written to last week, and advised of what an enormous freight bill he would have to pay, and how impractical it was to have such separators. But he says he'll risk the freight; and as to the separators he knows what he wants. But this is only one of a dozen such that come up every day. Some are willing to listen to advice; but most of them bow before the shrine of their pet idea. Josh Billings never came nearer the truth than when he said, "Eggsperiens iz a gud skule, but the tooishun is veri hi."

Your friend,— **WALTER B. HOUSE.**

Medina, O., April 17, 1883.

There are two points in the above I would strongly commend: First, letting the bees swarm, then moving the main part of the brood to the new colony for getting box honey. Secondly, filling the sections with large starters or freshly made comb partly worked out.

WINTERING BEES.

THE WHOLE OF IT IN A NUT-SHELL.

WELL, well! what's the use running after new ideas and improved methods in wintering if they only lead in a circle? Just stand still, and you will be right part of the time at least. Only hear the confused advocacy of clamps, chaff hives, a dry cellar, a root house, a bank vault, bury them in the ground in the snow, in a strawstack, upward ventilation, downward ventilation, no ventilation, no bottom-board, no honey-board, no cover, no enamel cloth, no pollen, no honey, pure sugar, no noise, no light, no dampness, plenty of water, running water, snow shoveled in to produce dampness, sawdust, absorbing material, old duds, corn-cobs, wooden spiders, division-boards, mattresses, quilts, cushions, counterpanes, pillows, etc., *ad infinitum*.

Well, what is the result? Why, the blessed bees wax fat and thrive, and the "blasted" bees languish and die under almost every kind of treatment.

ENAMELED CLOTH AND WATER IN WINTER.

What treatment do I advocate, did you say? Oh! that's not the point; I was trying to express my surprise to find that my shiftless and blundering method has been hit upon and almost commended by one of our highest authorities — Mr. Doolittle. I refer to the water collected by the enameled cloth (page 172).

I have only thirty swarms. I put 28 of them in the cellar just as they were in the open air — covers, enameled cloth, and all, face to the wall, all in one tier, four hives high and seven long. The bee-cellar is partitioned off by itself; is entirely dark, and has a chimney used for ventilation whenever I judge it to be necessary. Every hive came out in good order, yet dripping with water when moved from a level position. Another time I would give them a little slant, to facilitate drainage.

JOEL A. BARBER.

Lancaster, Wis., April 6, 1883.

Friend B., my wife said jestingly, a few days ago, that it didn't trouble her nearly so much when people told things that were not true as it did when they told things about her that *were* true. Perhaps this philosophy will account for a tendency of mine to feel a little irritated at your numeration of our wintering troubles and devices. It is laughable, anyhow; and if it is not *all* true, there is at least a pretty big grain of truth in it. I am glad to find out that you know how to winter your bees. Now just keep right on doing it, year after year, and pretty soon we shall *all* know how, won't we?

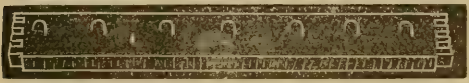
WIRING FRAMES FOR FDN.

ANOTHER STEP IN THE MATTER.

I SUPPOSE that you are crowded almost to death with business and bees-ness. But listen one moment, and then chatter away before that shorthand fellow—or, rather, lady. In wiring my frames I have no holes to make nor wire to trifle or bother with; and the frames when full look just as though they were nailed into the frames.

I think they work "boss." Fasten a piece of ⅞ board to the side of the work-bench, about 4 inches wide, and the length of the frame on the inside. Now make holes at every interval where you want a wire. Hang the frame on this block, and drive ⅝ wire nails into the frame over the holes. Turn over, and hang the other side on and treat in the same manner. When the nails are all driven in, take a pair of round-nose pliers and turn the point down in the form of a loop, or staple, and they will never pull out. You need nothing to hold the wire when starting, but thread it through the middle one at the bottom and give it a turn or two around, making a kind of twist; then go on around the frame.

I think it will be all plain to you; but for fear that it won't, I will send a piece with two places fixed. I use ¾ nails, but think ⅝ will be as good, and perhaps better. It takes, I think, a little longer to make them, but they are so much nicer it more than pays for the trouble.



BOTTOM-BAR, WITH WIRE-NAIL STAPLES IN IT.

If you like this plan, use it and welcome; but if not, you don't "have to." You can make the loop go across the grain, if you choose, but I turn them this way because it is so much handier, and they work just as well.

Bees are not wintering very well in this part.

Galesville, Wis., March 22, 1883. G. E. Dutton.

Thank you, friend D.; and although it seems to me some one else has suggested the same, or something similar, you have improved on the manner in putting in the nails and bending them, until I shouldn't wonder if it would be really cheaper for the majority of the friends, than drilling holes and weaving the wire through. The thin nail-heads on the wire nails can be easily sunken in level with the wood of the top-bar, and will not be in the way through any scraping of the top-bars; nor will they give the top of the frames an untidy look, as the wiring often does. If the wire could be put in more easily with the hooks turned at right angles, they could be easily twisted a quarter-turn after the frame is wired. And this suggests another idea that I am going to claim as my own invention: Should the wires be a little too loose, just twist the staples around until they have their requisite tension. There, now, boys, isn't this "brilliant"? Our 25-ct. round-nose pliers are just the tool for bending the points of wire nails into a hook. To do this rapidly, we want the wire nails made rather slender. Those we sell are made expressly to our order of a smaller-sized wire than those made first. In regard to your board for spacing the nails, I would suggest that the wood be cut out on the side next the operator, so that, in turning them, they can see the points as they come through. Friend D., I rather think we owe you a vote of thanks—quite a number of us.

HALF-POUND SECTIONS OF COMB HONEY.

ANOTHER SCHEME SUGGESTED.

I THINK the best way to supply the demand for ½-lb. sections would be to have the honey made in large frames, and then have it cut with a cutter into pieces about 2½ inches square (which, 1½ inches thick, would be about ½ lb.), and the pieces placed in square tin boxes just a little larger, so that they would slip in easily; then pack these in a large box, with a thick paper between the layers (or pasteboard), and when the case is full, press down the cover and fasten tight. The cases should then be kept right side up; but I do not think they would leak if they got turned wrong side up.

Perhaps the boxes could have covers, and be sealed as you seal the extracted honey in small pails. They would be nice for picnics or fairs, as they could be eaten right out of the box (I guess we should want ¼-lb. boxes for such places); ½-lb. boxes ought to be furnished for 2 cents each in large quantities, and perhaps less. I intend to try them the coming season, if I can get the boxes made.

H. S. Kingsbury.

Cavendish, Vt., March 23, 1883.

Friend K., I should not be surprised if your idea bore fruit, after all. Why not use our glass jelly-tumblers, and fill around the piece of comb with liquid honey, and then none will be lost by the drip and leakage. We can make you round tin boxes for two cents, easily enough.

WILLOW AS A HONEY-PLANT.

A HONEY-BEARING HEDGE.

BY this mail I send you a few cuttings from a willow that grows in a neighbor's yard, across the street from me. It sprouted up from the root of a Scotch drooping-willow that died above the roots. It is now three years old. I measured it this morning, and found it to be 18 feet high. The top is pyramidal, with long slender branches, making a most beautiful shade-tree. It blooms the first of April here, and is one of the best bloomers that I know any thing about. The catkins are very large, and yield yellow pollen, and honey in great quantities. When in full bloom it presents a very beautiful appearance. Bees work on it all day long, gathering a bright yellow pollen from it. It will grow readily in any soil, I think. I put out a few cuttings last spring along the fence, sticking them into the hard ground, and every one grew, some of them making a growth of 5 feet, and all are full of bloom this spring. Those cuttings I send you will bloom in a few days, if you stick them into the ground. It is very easily propagated by putting the cuttings into loose moist soil. It does not throw up runners or sprouts. I think it will make a valuable spring bloomer, and a pretty shade-tree. What variety of the willow is it? I think that bee-keepers would enhance their interests very much by planting such shade-trees as bloom in the spring.

There are different trees that bloom early when our bees need pollen and honey, that make beautiful shades. Among the best, I think, is the box-elder. Here it blooms just after the soft-maple and elm. It is hardier than any other shade-tree we have, is not liable to be preyed on by insects, nor burnt and blistered by the hot sun in summer, as so many of our shades are. It is true, the bloom does not last long; but it yields a large quantity of bee feed while it does last. It serves the double purpose of a shade-tree, and furnishes bee food. Bee-keepers in all of our towns and villages might, with judicious effort, line the streets and avenues with these honey-producing trees that would be of great assistance in building up their stock in the early part of the year, and aid in beautifying their homes.

WILLIAM LITTLE.

Marissa, St. Clair Co., Ill., March 13, 1883.

The willow you mention, friend L., has been spoken of several times before in our back volumes. I don't now recall the name of it, but it is the one generally used by nurserymen as stock for budding on to the kilmonark, or weeping-willow. This plant is thoroughly disseminated over the country, where these ornamental tops die, and leave the natural root to sprout up. I think they have been sold especially for honey-plants. We have one in our grounds in bloom now, this 16th day of April. We have put out the cuttings, and will test them to see if they are the same as those we have already. We have never seen the box-elder in bloom. Can this willow be used for a hedge? Who will tell us?

"Forgettery,"

Or Department for those who don't Sign Their Names, etc.

THE following illustrates how a supply dealer may be innocent, when circumstances seem very decidedly against him:—

Inclosed you will find one dollar, for which you will please send me a copy of your A B C; or if you have any thing later that you think will suit a man who doesn't know any thing about bees, please send that. I think A B C will suit me. Also send me a late copy of GLEANINGS. Please send as soon as you can, and you will very much oblige me.

Asbury, Mar. 14, 1883. J. M. ANDREWS.

In the above letter you will notice that no State is given. As the Postal Guide gives nine "Asburys" in the United States, we had either to write a postal card to every one of so many different States, or wait untill our friend wrote again. It seems he waited two weeks before he wrote again, and here is his card:—

Some time ago I sent you an order for your A B C book. I sent registered letter; recieved return card, but have not heard from the book yet. Will you be so kind as to send it as soon as possible, for I should like to have it? J. M. ANDREWS.

Asbury, Warren Co., N. J., Mar. 29, 1883.

You will notice that he seems to have positive proof that we received his money, and also that we knew his address. He is right in saying that he did get a return card, but this return card is simply a card furnished by the P. O. department, acknowledging the receipt of the registered letter. The clerk who goes to the postoffice, and signs these register cards, of course does not know whether all the addresses are inside of the letters or not; so that, when the letter came to be opened, we had no possible clew as to where our friend lived, who wanted the A B C book.

FRIEND TRAIN'S IMPROVED BEES.

THE COMING BEE.

I COMMENCED bee-keeping in the spring of 1864. I bought, in February, 1864, 2 swarms of large brown bees, called at the time the "Kickapoo" bees. They had descended directly from wild bees found in the Kickapoo woods. I kept them in the old way with varying success, making a great many experiments in management, winter and summer. I bought and tried a great many patent hives, but did the best in hives of my own devising, until the winter of 1878, when I consulted you, and took your paper and read your A B C as fast as published. However, I had used two styles of frame hives before that, both patent, and neither as good as a large double box hive devised by myself, which was a moderate-sized family room, surrounded by a hollow wall of dead air, and a large chamber above for using surplus boxes. I had never aimed to increase to more than 25 or 30 swarms to winter, killing all that I did not want to keep and could not sell. I always worked on the plan of the survival of the fittest until 1876 or 1877. I then let them increase to nearly a hundred swarms, when I began to make some more inquiry and study, looking to more profits; and since 1878 it has taken nearly all my time and attention; and it is more and more interesting, and it has been fairly profitable.

I have not experimented much in the different races of bees, but I have been an interested spectator of the experiments of others. I read all that is said, pro or con, in GLEANINGS and *A. B. J.*, and in many books, among which A B C is about A No. 1, though Quinby, by Root, and Cook's Manual have been not read only, but carefully studied; and I have carefully noted the work and habits of the races in different apiaries, and I am now determined to stick to and develop a cross between the yellow and brown bees in the manner proposed. And as I am a small man of small means, I am not going to try to do every thing I can hear or think of; but this one thing I mean to do, if I live long enough. And now let every man follow out his own ideas with his own plans, and we shall see what the "coming bee" *will* be.

So far, I find this *cross* (all would say hybrid, but a cross between two races of bees can not properly be called a hybrid) to be active, hardy, and *very, very* energetic in finding honey, if there is any within their reach. And they do fly from 6 to 8 miles every year that basswood yields honey, and bring me a large surplus, from 500 to 2000 lbs., and the young swarms that issue at or about the commencement of basswood bloom always fill their brood-chamber with basswood honey; and they work on red clover just as freely as on white or alsike; and they are as docile as I care to have them. I can do any thing with them that I can do with full-blood Italians, and with no more smoke. They have one trait that I value highly, and which some, if not most, Italians lack. While they will stay on the combs in handling well enough for all my purposes, they will drive before smoke very readily, and will not hang to and mar the honey when you are trying to drive them off; and I believe I can take nearly twice as much comb honey from them in a given time as I could from full-blood Italians; and this is no small item with me, especially in such a year as 1881, when I took over 11,000 lbs. of comb and 3000 lbs. extracted from 125, spring count. H. V. Train.

Mauston, Wis., Dec. 8, 1882.

VARIOUS ITEMS FROM FRIEND DOOLITTLE.

"BEES WON'T STING SOME PEOPLE."

I WAS much interested and amused in reading R. C. Taylor's account on page 179 of the man who thought he could handle bees without getting stung. Many similar cases had come under my notice, all of which resulted as friend Taylor's did; i. e., the persons claiming bees never stung them were soon put to flight, receiving more or less stings, till one day an elderly man came to the bee-yard. I cautioned him not to come too near (as my custom is), but he did not heed it, saying, as he came close up to the hive I had open, "Bees never sting me." As this was in May, the bees were not so inclined to sting as they are later in the season; and although I wore a veil, still few bees offered to sting, so of course he was not stung. Later in the season, after the honey-flow had ceased, as myself and a friend of mine were taking off nearly the last section honey, this same man came walking into the apiary. The friend was about to caution him about coming too near, as the bees were quite cross, when I told him in a whisper that the bees never stung that man, so there was no need of caution. As he came where we were I laid aside the smoker; and when handling the cases of sections I managed to jar the hive and crush some of the bees, which were cross hybrids. The air was soon filled with angry bees which were flying in rage about the heads of my friend and myself, stinging through pants and shirt, and even crawling into our pants pockets, and stinging there. *Very much* to my surprise, not a bee flew angrily about this man; and to test the matter still further I asked him to take some of the side cases out of the hive, so as to help me while I held others. He did as I requested, while I carelessly let a case of partly filled sections drop upon the top-bars of the frames which were covered with bees, killing a dozen or two. This brought a cloud of bees at the heads of my friend and myself, like so many hailstones, while the air was fairly perfumed with poison from the enraged bees; still not one offered to touch this man. I closed the hive; and as we walked toward the house, my flesh fairly crawled at the hissing of the bees on my hat and clothing, with now and then a sting penetrating through; still this man was not stung, nor did I see a single bee offer to sting him. Afterward he told me he had kept bees for years, and never was stung by a honey-bee in his life. I told him I would give considerable money if I could have the same freedom from stings he enjoyed. Has any one met with a similar case, and how can it be accounted for?

ENAMELED CLOTH, ONCE MORE.

Upon setting about a third of my bees out of the cellar I find that those which were full swarms having enameled cloth over the frames have wintered well, while the weaker ones (I had a few nuclei last fall I put in cellar by way of experiment) with said cloths over them are in poor shape. The bees are nearly all dead, and the combs are dripping with moisture. The honey had soured, and the bottoms of the combs are quite moldy. The nuclei having quilts over them are in much the best shape, while the strong swarms with quilts are not nearly as good as those with the enameled cloth. This would seem to show that the strong swarm maintained warmth enough to drive the excess of moisture out at the entrance of the hive, except enough to supply their need of water; while the weak ones, not having that warmth, allowed the moisture to condense on the cloth in such quantities that it ruined them. On the other hand, the dry warm quilt benefited the weak, while it retained no moisture for the strong swarm to slake their thirst.

SETTING BEES FROM THE CELLAR.

I find that most parties wintering bees in the cellar are in the habit of setting all out on one day. When this is done the bees will mix, more or less, if no precaution is taken to set them on the stand they occupied the season previous, so some stocks will have more than their proportion of bees, and others be weak. Of late years I have adopted this plan, and find I can set out the bees with no mixing, without setting any on their old stands, it making no difference where they are placed. On warm days, at about the time the first pollen appears, I commence about 4 o'clock P. M., and set out, say 10 swarms, scattering them over the bee-yard as far apart as possible, which prevents their mixing. By this time of day the bees which have been out previously, have ceased to fly pretty much, so there is no danger of their robbing those just set out, which is often the case where bees are set out in the middle of a warm day; as those newly out are so anxious to fly they pay little or no attention to robbers. If the next morning is fine, ten more are set out before the others commence to fly, so they have their flight and get prepared for robbers by the time those out before get on the wing. These last ten are scattered over the apiary as the first was, so as to be as far from each other as possible, paying no attention to how close they come to those already out. Thus I set out morning and evening every pleasant day, till all are out. Having set out ten this afternoon, caused me to speak of it, as this way pleases me so much better than the old one did. First pollen today. G. M. Doolittle.

Borodino, N. Y., April 14, 1883.

I too, friend D., have heard people say bees would not sting them, and I have heard many more say that bees stung them at every opportunity, and that they would even go several rods from their hive on purpose to sting them if they came anywhere near. Now, my position in all this as you know, perhaps, has been that bees are no respecters of persons; that it is the behavior of the individual and not the individual himself. In all my experience I have never had any *good* reason to think otherwise. The case you give is a little surprise to me; and if I were you I would not drop the matter there. Get this man to work again, and work among the bees day after day; and if it really turns out that he never gets stung, he will be a novelty, to the bee-keeping world at least. Even though the facts you present seem positive and conclusive, yet I can not help thinking it was somewhat accidental. I have often been among enraged bees when, although they were stinging others right and left, they seemed to pass me by; but I have always thought it was more the way I behaved than any thing else. Another point occurs to me here: While others are complaining bitterly, and being bitten by mosquitoes, I never get bit at all. This has been verified dozens of times. I always explain it to my friends in a joking way, by telling them that the mosquitoes don't consider me "good to eat." I agree with you, that if I could be insured to be free from bee-stings without veil or smoke, I would give quite a little sum of money to be taught how. Can any of the brethren give any further facts in regard to the matter? By the way, friend D., were you not a little wicked when you killed the bees and bumped the sections in order to get our friend stung?

In regard to the enameled sheets: Other reports agree with what you mention, that powerful colonies seem to do better for having the thin impervious coverings over them; while with weak ones it seems to keep them too damp. Very likely this will account for many different experiences having been reported from enameled sheets for winter covering.

I am inclined to think your suggestions in regard to setting out bees are very valuable. I am the more interested in it because we have determined to winter at least a part of our bees next winter in the nice cellar underneath our new brick house I have been telling you about. One of the principal objections I have about cellar wintering is the difficulty in getting the bees out and getting them started to fly all right. The more experience I have with spring dwindling, the stronger I approve of your idea, that bees should remain in their winter repositories until the first pollen begins to come. If I raised only comb honey, and didn't rear queens for the market, perhaps I would still stick to the chaff hives. In fact, reports seem to be so very favorable with chaff hives, even during the past severe winter, I should hardly think of using the cellar instead of them, were it not for the fact of our rearing queens for sale as above mentioned.

THAT HONEY-HOUSE, AGAIN.

ALSO SOMETHING ABOUT MARKETING HONEY.

I HAVE been rather anxiously watching to see some plan for a honey-house something like the one Mr. Flanagan, of Belleville, Ill., spoke of in last Dec. GLEANINGS. I want to build one this spring with shop under the same roof, in which to make hives and put sections together; in fact, every kind of work pertaining to an apiary — one suitable for storing, extracting, and preparing for market the honey from 75 to 100 colonies of bees. I should like one not too expensive. I think a house so constructed as to allow a good cellar under it for wintering, in case a person wished, would be a good idea. It is certainly not best to put bees in a cellar under a living-room, or one used for storing vegetables.

In writing to the bee-papers it would add to the value of the reports if correspondents were to give the prices they were selling their honey for. It would enable us to get something like uniformity. I had quite an experience the past season in that respect, owing to our large yield of honey. I was forced to seek a market outside of the towns in which I had usually sold my crop. In doing so I went to a city some 35 miles off, containing about 40,000 inhabitants. There I of course met with more competition than I had been used to, but I succeeded in selling with but little trouble. Considering that I was a stranger, my honey did more to recommend itself than any thing I could say. I learned something of the way other producers placed their crop on the market. Among other things I was led to think that some of them sold at a much less price than they could have received, simply because they had large amounts of it, and were not posted in general in regard to its worth. Such persons are the means of injuring the market greatly for the product of those who are fully posted, and have taken pains to put their honey on the market in good shape and popular-sized packages. Another thing I observed was, that the 4¼x4¼ sections holding 1 lb. were more in demand than any other size. Box-hive men do a great deal toward depressing prices. Thanks to the improved system of bee-keeping, their numbers are growing "beautifully less." I also found quite a prejudice existing against extracted honey. I took only a small quantity with me, for fear I should not close it out readily. I had it well ripened in Mason quart fruit-jars, with some of those nice blue and bronze labels purchased of you. The first grocer I showed a sample to bought the whole lot "without a word." I have found the above package to be the most popular for extracted of any thing I have tried so far. My comb honey was in sections holding 1¼ lbs., 4½x5. I received $6.00 per dozen for the extracted, and 17 cts. per lb. for the comb.

I do not wish to be understood as dictating; but with the rapidly increasing interest in bee-keeping I should like to see GLEANINGS semi-monthly, allowing the matter in JUVENILE to be put in the regular issues of GLEANINGS.

Why can't our bee-men who are writing and revising "bee books" insert some good plans for a building suitable for honey and the apiary?

Duncan, Ill., April, 1883. W. H. GRAVES, 38.

Thank you, friend G., for your ideas in regard to a honey-house. I know it ought to be in the A B C book; but with the present stress of business, I hardly see how I can undertake it just yet. Besides, there are many points, it seems to me, as yet rather undecided. It is growing, and will be soon fully grown, I trust.—I heartily agree with you in regard to marketing honey. If you will take notice, most of those giving reports, or at least many of them, do tell what they receive for their honey. And I hereby ask the friends, when sending in the reports, to be sure to state what their honey sold for.—We are considering the matter of making the JUVENILE full size; but how about the price, friend G.? An even dollar seems to be so handy, we have hesitated to make any change in the price. May be we can soon make GLEANINGS semi-monthly at an even dollar. We shall see.

Heads of Grain,

From Different Fields.

SOFTENING CANDIED HONEY BY STEAM.

FOR several years I have been experimenting on the best way to get candied honey out of the combs in the spring. I think I have experimented away fifty dollars. My last invention, although very simple, is a grand success. The boiler for dissolving the candied honey in the frames, ready for extracting, is made thus: Make it ⅜ of an inch longer than the top-bar of the longest frame you use, and ⅜ of an inch wider than the top-bar of the shortest frame you use. This will let your longest frames in lengthwise, and your shortest frames crosswise. Now if you have an intermediate frame, all you want is a cross-piece to lay across your boiler. You want your boiler 4 or 5 inches deeper than your deepest frame. Next take a strip of the same material of which your boiler is made (which should be of galvanized iron for several reasons), 2 in. wide, and as long as will go around your boiler inside. Double this in the shape of a V, and solder the two edges inside ¾ in. from the top of your boiler. For ends of frames to rest on, this strengthens your boiler; so if you should not want to store honey in it, you can handle it without injury. It also lets your frames down so you can store it full of frames; and as I use mine for carrying frames back and forth for extracting, I can cover it up so that bees and flies are shut out.

HOW TO USE THE BOILER.

Set your boiler on the stove, with 2 inches of water in it; make up a good fire; commence to uncap, and set frames into your boiler as fast as you get uncapped. When your boiler is full, begin to extract with the first frame you put in. The steam will dissolve the honey, and warm the comb so it will not break. If any should be so cold or so old as not to be all dissolved, put it back for a few minutes.

COOKING FOOD FOR STOCK, BY STEAM.

I use my boiler in winter, having quite a number of hogs on my hands; and corn being high, I thought I would try cooking feed. I appraised my hogs at the time I began to fatten; have weighed all the corn fed; after deducting feed and value of hogs at the time I began to fatten, I have eleven dollars apiece for labor, besides the manure, which fully pays all labor. One of my neighbors has fattened 5 hogs on raw corn, and he says the corn is worth more than the hogs will bring; so you see here is quite an item. W. H. BALCH.

Oran, N. Y., March 16, 1883.

Your plan for softening honey by steam is hardly new, friend B. Does not the water from the condensation of the steam dilute the honey so much as to render it unsalable? It is true, it would be just as good for feeding bees; but if you want it to feed, why not hang the frames directly in the hives? We have never had any candied honey that we could not feed out in this way, especially if we give it to them during warm weather when they could get water.—Your idea of cooking food is good, and I believe it has been well demonstrated that it pays a good interest on time and money invested for feeding any kind of stock.

ANOTHER PLAN FOR WATERING BEES.

You no doubt remember, friend Root, that I am a strong advocate of water for bees, and of having it plenty and convenient for them, as they will take water the nearer the better, while they often pass over flowers containing honey, and fly half a mile or more before they attempt to load up. I have read of and seen a great many devices for watering bees, and I will now give you mine, and ask you to try it, and see if the bees don't take to it sooner than any thing you have seen. Take a board 12 in. wide, or wider, and from 10 to 16 ft. long, suited to the number of colonies; now nail strips 2 in. wide all around the edges, water-tight; in short, make a trough one inch deep. Place it in or near your pump or spring, one end from 10 to 12 in. higher than the other; fill and round up the trough with sawdust, leaving the top uneven. Now place a salt-barrel, or some other kind, on the upper end of the board; make a small hole in the bottom, so that the water will trickle out, and fill it up and cover tight, to avoid drowning bees. When the sawdust is once saturated it will take but a small drip to keep it so. Basswood sawdust seems to do best. Once a week put a handful of salt in the barrel. Bees seem to like to take water from sawdust better than any thing else, and no danger of drowning. JAS. A. SIMPSON.

Alexis, Warren Co., Ill., April 9, 1883.

A WORD ABOUT QUININE.

Why do you say our first physicians pronounce against the use of quinine? I supposed—and I mean to keep informed in such matters—that our greatest doctors regarded this alkaloid as one of the safest and very best of tonics—an invaluable medicine.

A. J. COOK.

Agricultural College, Lansing, Mich., Mar. 8, 1883.

Thank you, friend Cook. I got my information in regard to quinine from a homeopathic doctor, if I remember correctly; and as quinine is in such common use, I am very glad indeed to be told that it is not among the remedies to be avoided. Very likely you are right, and I am glad to know it, because it would be a sad thing for so many of our competent physicians to make a mistake in such a matter.

GOOD CANDY, ETC.

I am losing some of my bees. Those that had sealed honey some time ago are out now, and I must feed or lose them. I can not make the Good candy so but that the bees will suck out the liquid, and the grains of sugar will fall to the bottom of the hive like sand, and be wasted. I think of trying to melt honey and sugar together, and pour into a comb and hang in the hive. If I lose all the bees I have, I shall save combs and get some more bees to fill up again. WM. FULLER.

Woodville, Wis., Mar. 27, 1883.

I know, friend F., that we have this trouble with the Good candy. If some way could be devised so it would entirely break the grain, so that the bees may consume it all with the honey, it would be ahead of any bee-candy yet invented. Maple-sugar cakes soaked in honey would probably answer all purposes; but, unfortunately, maple sugar is more expensive than our granulated sugar of commerce. While granulated sugar is sold at 10 cts. per lb., we have to pay 12 cts. for the best quality of maple sugar; and even then maple sugar contains much more foreign matter, besides the larger quantity of water, than the perfectly dry granulated sugar. I am inclined to object to melting the sugar, or using heat in any way, if we can possibly avoid it. If some kind of a mill could be used that would grind up the granulated sugar and honey together, so as to completely break the grain of the sugar, perhaps it might answer our purpose. The honey and powdered sugar could then be molded into little cakes which would probably dry sufficiently on the outside so they could be handled easily, while the interior is in a moist state, just about as the bees would want it.

A YOUNG QUEEN LEADING OUT THE FIRST SWARM.

I wish to relate something I do not see mentioned in the excellent manuals or bee journals. In early spring of 1880 I clipped the wing of a nice young queen, and in 1881 (May 29) a swarm issued with a *young* queen, and did well. In 1882 (June 21) the same was repeated again, leaving the old queen, and this winter the first-named colony dwindled until March 17; the last bee and the queen that was clipped died; now, was it not strange that young queens should leave each time?

DOES THE LOSS OF A LEG IMPAIR THE USE OF A QUEEN?

From the most prolific queen I now have I cut a leg off in clipping, in 1881. I think it strange it did not injure her usefulness, but she now has brood in all stages. JOS. K. HARVEY.

Scranton, Pa., March 29, 1883.

Friend H., there are exceptions to almost every rule in bee culture. The case you mention is a marked exception. It is possible that the clipping of the queen may have had something to do with this. In all cases heretofore coming under my observation, where a young queen led out the first swarm, we have invariably found the old queen missing in some way, decrepit or crippled.—I am inclined to think the case you mention, where you clipped the leg of the queen, that she produced less brood than a perfect queen would have done. We have had experience with many such crippled queens; but on careful observation concluded the loss of the leg usually impaired their ability to lay rapidly.

A SELF-MADE BEE-MAN.

My bees are all in splendid condition in cellars. I hope they will get through all right. I have but 21 colonies, but they are all Italians, and in Simplicity hives. I have all the necessary implements and machines for making hives that I run by a one-horse power except a machine for making one-piece sections and a foundation mill; but I am thinking of getting some before long. I raised my queens myself last summer, and succeeded well. I have a lamp nursery. I make my foundation with plaster molds that I made myself on the Faris plan, with some alterations. It works well, but I am thinking of getting a Given press. I made my saw-table, and got every thing all up for making hives myself in my spare hours. I never learned any trade, but I have done it by the instructions found in the A B C book, with the changes I thought would suit my case best. Every carpenter who has seen them says I have learned the trade. Perhaps I think more of them than I would if they belonged to somebody else; but any way, I make my hives very well and quickly with them. I shall not advertise at present; I can sell all the hives I can make without advertising, as I work only in my spare hours; but next summer I think I shall have more time to devote to it, as I shall have more help.

J. V. BELLEFLOWER.

Montreal, P. Q., Can., March 1, 1883.

A GOOD REPORT FROM THE ASTER.

I have taken 100 lbs. of comb honey from a single colony of bees, gathered from the aster, in the month of October. It begins to bloom Sept. 15; it blooms until frost, which generally comes about the 1st of Nov. I have seen its fresh blooms in December. I have no idea how much honey this country could produce; but I suppose the pounds would be increased 100 fold if the people would equip themselves with bees and other facilities.

I. R. Good, of Nappanee, Ind., passed through this country a few days ago, on the lookout for a suitable place for queen-raising. I think he will do well here, as he has already created, by his flying trip through this part, a great excitement about queens and pure bees. Everybody is anxious for him to settle here.

Tullahoma, Tenn., April, 1883. T. A. GUNN.

SAWDUST IN LIEU OF CHAFF.

Last fall I packed in Novice's chaff hives 60 colonies; in single-walled hives with store box set over, and intervening space filled with sawdust, 6 colonies; also six nuclei in chaff hives. The hives were all placed on the ground, and sawdust heaped up all around, except at the entrance, from 6 to 10 inches. The bees were confined on from two to ten frames, according to size of colony and amount of honey in combs, by the use of sawdust division-boards, the space between division-boards and hive being filled in some with sawdust. Where space would permit, the frames were separated from ¾ inch to one inch. On top of frames were placed three or four ⅜-inch strips crosswise; and over these, lengthwise, several 1-16-inch strips, comb-guides broken in two. Over this arrangement was a clean burlap, and over all a ten-inch chaff cushion. I forgot to say, by the way, that a good part of my hives are stuffed with sawdust, and I am of the opinion that good sawdust, from facts seen in connection with my case of bees, is superior to chaff, the only objection being its weight.

On Monday, the 9th, I examined every hive, removing sticks, and pushing frames up to the proper distance apart, took off burlaps to keep clean for next winter, putting on enameled sheets instead. After getting through, I felt like giving a "hurrah" for the chaff hive and the L. frame, for I found every colony alive; two were queenless, and one lady the ruler of a nucleus, who had not yet learned spring had come. But a section of honey placed over the frames brought her around, and to-day she is laying. Excepting these three, my bees are as strong to-day as they were last fall when put away, and some a good deal stronger.

GEO. F. WILLIAMS.

New Philadelphia, O., April 11, 1883.

The queen I got of you last June proves to be a beautiful one, and her little "bairns" are wonderful workers. Though she is not a very prolific queen, she has a fine large swarm in the hive, which are working finely now, with several frames of capped brood. The bees last fall had crowded her on 2½ frames, and filled the rest of the frames with honey, instead of making them "stand back and give room." But I must not forget the report of my neighbor.

FROM 1 TO THIRTY-SIX, AND 140 LBS. OF HONEY.

Hurrah for the "Lone Star" again! as she beat the world last year in amount of honey from one queen, she now beats the world again in increase from one queen. C. W. L aw, on Honest Ridge, a neighbor of mine, from just *one* hive last spring increased to 36 swarms, including two that he knew got away, and might have lost more. His original hive swarmed 7 times; the two first swarms that came out, each five times; others, 4 and 3 times, till he reached the astonishing number of 36. This statement can be vouched for by nearly all his neighbors. Several of them assisting him in the care of them, and say "it's so," and are willing to testify to the same. He was urged to make a report to some bee journal; said he took no journal, nor knew of any one, and declined for that reason; but he says the above are the facts. The highest number reported in GLEANINGS that I have seen is 39 from one hive and one nucleus, which does not equal 36 swarms from one hive. Is not Texas entitled to the banner in both bees and honey? From one hive he made or took 140 lbs. that he noted, but did not know how much he took in all.

CHAS. M. BUTTOLPH.

Frosa, Limestone Co., Tex., March 28, 1883.

This is indeed wonderful, friend B. I think Texas is coming in close for the banner. We should be glad to hear from your neighbor. I suppose he is going to keep on and tell us what he can do another season. Such a report seems almost improbable; but with a long season and an uninterrupted flow of honey, I suppose it would not be a very difficult matter. We are glad to know he lives on "Honest Ridge."

WOOD SEPARATORS.

Last year I used wooden separators entirely; I like them well. I think I had only two or three cards fast to the wooden separators, and some of the frames were filled three times. I wintered the most of my bees on their summer stands, packed, and in that condition I have lost only two colonies in five winters, and one of them was a drone-laying queen. I have 43 colonies at this time.

AN EMPTY HIVE UNDER THE BEES FOR WINTER.

I experimented on one colony, a young swarm. I set said colony on top of empty hive; no frames in lower hive, and no bottom in upper one. I moved the hive back on the bottom-board, so that there was a one-inch hole the width of the hive, and the entrance open full width. The result was less dead bees of any colony in the yard. E. E. SMITH.

Pittsford, Mich., Apr. 13, 1883.

NOT "BLASTED HOPES," BUT "SMILERY."

Last month my husband, H. O. Morris, gave you an account of his accident at the bridge, and asked for a place in Blasted Hopes. You did not put him there because he so miraculously escaped death. You thought, too, that he should not have taken the *risk* of crossing at such a time. The stream was not so much swollen as to be dangerous to *cross*. The bridge went down because the timbers were thoroughly rotten. H. O. neglected to state this fact to you, thereby gaining unjust censure for himself. However, I agree with you in not thinking him a candidate for Blasted Hopes; and I told him if he wrote for that department *I* should write for the Smilery. I am *so* thankful that his precious life was spared, and we have the prospect of another pleasant summer's work among *our bees!* Besides, at our town meeting an appropriation was made to pay the damage to property caused by the falling bridge.

FROM 22 TO 42, AND 2500 LBS. OF HONEY.

Last spring we had 22 colonies of bees, and increased to 42, and obtained 2500 lbs. of honey, leaving plenty for them to winter on. The work of caring for them was so great last summer that H. O. needed an assistant, so I hired a girl to do my housework, and I did bee-work, which is not so hard, and pleasanter, than the former.

BEE-STINGS AS A REMEDIAL AGENT, AGAIN.

The occasional stings I get rid me of an old enemy; viz., salt rheum. When I work among the bees it does not trouble me at all. Once during the past winter it came out, and was so annoying that I went to the cellar, where we keep our bees, and induced one to come out and sting me. It did not object in the least to doing me this favor; in fact, bees are nearly always ready to sting, if properly dealt with. My salt rheum has not appeared since. We always winter in the cellar, and have never yet lost a swarm.

KEEPING THE BEES IN THE CELLAR UNTIL APRIL.

Our 42 came out very strong and active the 5th of April. People here who had them out earlier must have lost largely from their flying when they would have been better off in the hive. I have invented a cheap and easy method of putting on sections, but will not describe it now, lest my letter be too long.

Tiskilwa, Ill., March 16, 1883. COLA MORRIS.

MAPLE HONEY, AND HOW TO GET IT.

My bees are doing well on the maple; not on the flowers nor buds, but on the sap. By the way, let me give you my recipe for making maple syrup. I put a handle 10 or 12 feet long into a sharp hatchet or small ax, and make a slight cut 12 or 15 feet from the ground in the south or south-west side of the maple-trees, either hard or soft; that is all I have to do. The wind and sun will turn the sap as it runs down the tree to syrup before it reaches the ground, and the bees will volunteer to gather it; they'd rather do that than rob each other. One hundred swarms can successfully tend a camp of 200 or 300 trees, if they are in proximity. The birds and bees taught me this. JUSTUS BUTLER.

Leipsic, O., March 28, 1883.

Why, friend B., you are infringing on Mr. Merrybanks' plan of running a sugar-bush and apiary all together. I don't know but your plan will really work. We have got the maple-trees, but we have hardly enough bees this spring to make a good show in a sugar-camp of a hundred trees.

NEW SWARMS GOING 30 MILES, ETC.

I happen to be situated so as to learn something about bees which is certain, as I brought and owned the first bees that were ever known to be in this part of the country. There have been no wild bees seen here; in fact, there are none.

HOW FAR DO BEES FLY?

My bees, when pasture was scarce, have gone 3½ miles. Some hybrids left their owner last spring, and were hived something over thirty miles from the place of exit; but that was about the nearest timber that a bee could get into.

BEES WITHOUT WINGS, AND HOW IT CAME.

I had some bees hatched without wings. They were from some larvæ belonging to hives that were sent to me in September, and were so badly put up that most of the bees had perished. I like your journal well. I like the way you advocate the cause of Christ. This is new country. When I first came here there was scarcely a house in the county.

Sweetwater, Tex., Apr. 14, 1883. J. C. TURNER.

Thanks for the facts you furnish, friend T. The distance you name just about agrees with our experience; namely, that bees will fly for stores from three to three and one-half miles. That is, that agrees with our experience in our locality. In regard to the hybrid swarm going 30 miles, I should think you must be mistaken somewhere. A swarm of bees seldom moves faster than a man can run, do they? say five or six miles on hour. To go 30 miles they would have to fly 5 or 6 hours at one continual stretch.—I have often seen wingless bees, caused by injury to the brood before it is hatched. The same way queens often get out with imperfect wings where the cells are handled rudely, or where they are cut out before the queen is nearly ready to hatch. In cutting cells for the lamp nursery, we prefer not to move them until just before the first queen hatches, then we seldom have any trouble in wingless queens. Thanks for your concluding words.

FROM 100 TO 150, AND 13,000 LBS. OF HONEY.

I send you my report of crop of 1882. Wintered outdoors with good success; hives light in spring. Cause, very mild winter. As the spring was cold, wet, and late, June 15th found us reduced to only 100 colonies, having reduced by selling and doubling up, to have all *strong*. Well, the flood of honey came, and in less than 3 months we had taken 1000 lbs. comb and 12,000 of extracted honey; also 50 new colonies. This honey is nearly all sold at 20 cts. for comb and 10 for extracted. We have no linn. Our crop is from clover and smartweed. My crop of 1881 was an average of $7.00 per colony from 100 hives. My expenses for cans, express, and commission, was $200 last year; the other year, about $100. My secret of success is strong colonies.

J. E. WALCHER.

Millersville, Ill., March 10, 1883.

A BRIEF REPORT OF LAST SEASON'S DOINGS AND WINTERING.

I started in the spring of 1882 with 10 colonies; increased to 80 and got 1000 lbs. of honey. When winter came on I had sold down to 24; went into winter quarters with 24 colonies; came out the first of April with every one, 24, in splendid condition.

MODE OF WINTERING.

In large chaff hives, with space from 6 to 10 inches for chaff; no division-boards, entrance, ⅜x8. I use the new Quinby frame, 11¼x16½ outside measure. I could not be induced to go back to the Langstroth. I have my hives so arranged that I do not have to fuss with broad frames, sections, racks, separators, etc. The 4¼, or pound section, just exactly fits inside of the Quinby hive (the hive described in Quinby's new "Bee-Keeping"), which is 17x12 inside measure; 4 of the 1-lb. sections just take up the 17 inches lengthwise; 6 rows just take up the 12 inches, lacking ⅞, just right for slipping in a board to key up. Three tiers can be used in one upper story, and it can either be used for section-crate or shipping-crate, or extracting, or a common bee-hive. The bottom of the lower tier of sections comes within ¼ inch of the frame in the lower story, and there is nothing between them.

DEVELOPING A HOME MARKET.

I sold, last season, $557 from the bee business; have sold this spring 10 full colonies at $10 per colony. I had not enough full colonies to meet the demand. I have never shipped any thing yet. I have established a home market, and have all I can handle. It's better than farming, so I let the farming into other hands. A. H. DUFF.

Flat Ridge, O., April 8, 1883.

CAN A BEE FLY AT THE RATE OF 90 MILES AN HOUR?

On page 134 of this month's GLEANINGS, Mr. Doolittle endeavors to show that bees can fly 90 miles an hour. I have often noticed that, with a breeze blowing at the rate of 6 or 8 miles an hour, bees flying against the breeze travel but little faster than a person walking an ordinary gait; and bees flying against a wind blowing at the rate of 18 or 20 miles an hour make no headway at all, and get along only by taking advantage of windbreaks, such as trees, fences, houses, etc. A wind at the rate of 60 miles an hour is said to be a hurricane; and a wind at the rate of 90 miles an hour would take Mr. Doolittle's bee-hives out of his yard like chaff in a common breeze.

Our bees travel from 6 to 16 miles per hour (I think), governed by the wind and the loads they carry. Last season our bees averaged over 200 lbs. per colony. If Mr. Doolittle's bees can fly 90 miles an hour, and possess equal strength as honey-gatherers, comb-builders, etc., with such a season as we had he should obtain an average of 1000 to 1200 lbs. per colony. S. A. SHUCK.

Bryant, Ills., March 10, 1883.

A BLUE-EYED BABY, GOOD NEIGHBORS, AND OTHER BLESSINGS.

I have felt lost without GLEANINGS, but could not send before this year, on account of a blue-eyed baby that the good Lord has sent us. I have 97 swarms of bees in double chaff hives, in good condition, and am making a success of bee-keeping. Mr. G. M. Doolittle has been a very kind neighbor, and I am largely indebted to his instructions and counsel for my success. I want to thank you also for much help and encouragement. A. L. EDWARDS.

Skaneateles, N. Y., March 28, 1883.

May God's blessings rest on the baby, my good friend E.

APIARIAN EXHIBITS, ETC.

I notice after the premium list of the Tri-State Fair, in the honey department, you say you gave it to show what Ohio is doing. Really, are you getting to think that Ohio is all there is left of this world? I should not think you would have forgotten Michigan after your visits to it, and your frequent notices by Cook, Hutchinson, Heddon, and many others, that it yet exists. Indiana, too, by what I see occasionally in GLEANINGS, is yet in existence. Are you not aware that these two States have as much to do with this fair as Ohio has? Perhaps you think because the committee that have effected this are Ohio men, Ohio does it all. But that committee owes its appointment to a Michigan man.

BEE-FEVERS, AND THE REMEDY.

Mrs. Harrison's way of curing fever is superb — none better; but in my practice I have found a few small doses of quinine and cayenne good after they were cured to keep them cured. She is excellent in prescribing for the bee-fever; perhaps she can give a remedy for "small sections on the brain"—the prevailing disease among some bee-keepers at the present. My remedy is a warm bath, followed by three grains of good sense, hourly, if the patient can stand it; if not, all he can stand.

E. B. SOUTHWICK.

Mendon, Mich., Apr. 9, 1883.

I really beg pardon, friend S. It must have been my absent-mindedness that made me mention only Ohio. I commend your remedies, especially the last ones.

SENDING FOUL BROOD TO MICHIGAN, ETC.

Page 171, April No., contains the request that you please keep Prof. Cook reminded that infected bees will be sent him, etc. Allow me, as a Michigan bee-keeper, to solemnly protest against sending foul brood to this State on any pretense whatever. I trust Prof. Cook won't be the first to allow our law against the spread of foul brood to be broken.

Abronia, Mich., April 9, 1883. T. F. BINGHAM.

I agree with you in the main, friend B.; yet if, by letting a single colony of foul brood come into the State of Michigan, to be used only by a careful man like friend Cook, for the purpose of getting a perfect remedy for foul brood, it seems to me the good would overbalance the evil. Would this not be copying the law in spirit, not in letter?

Here is a line from Prof. Cook himself on the matter:—

Dear Mr. Editor:—Upon further consideration I think it would be unwise to have foul brood sent to me here. It is not a good material to send about the country. So I have written to Mr. Muth not to send it. Practically this will make no difference; for, like Mahomet and the mountain, if the mountain won't come, Mahomet will go. I can go where foul brood is, and try the experiment. A. J. COOK.

Lansing, Mich., Apr. 11, 1883.

HONEY-DEW, NOT ALWAYS DARK HONEY.

Let us look at our bees. They did very well for me last season, and went into winter quarters in extra good shape, I thought, for they were very strong, and had plenty of honey. I went into winter with 32 or 33 swarms, and at the present writing they are half of them dead, and I do not know what to think. I have heard people talk about honey-dew, but I never "swallowed" any of that until last fall, and then I had to give it up, for we had considerable of it. I could not see what my bees went to the woods so early in the morning for, so I followed, and found the maple leaves wet with dew; and it was sweet, and the bees busy gathering that sweet. This was after the honey season was over with us, or nearly so, and they made a nice lot of honey; but it was not as thick and heavy as clover honey. My cousin, some three miles from me, noticed the same thing I did. The honey was very fair and clear. Could that have any thing to do with my bees dying. There are others who are losing as well as myself. All of those colonies that have died have left plenty of honey. I do not take GLEANINGS now, but I get it to read, and I prize it very much. The Homes are worth all the book costs.

RASPBERRY HONEY; IS IT POOR?

I saw an article in a Cincinnati paper, calling the honey that the bees get from the raspberry blossom not very good, being dark, and, I think, bitter. There are a good many raspberries cultivated in this neighborhood, and everybody wants a section or two of the honey. We think it very clear and thick, and I think there must be a mistake about its being poor.

Z. D. ST. JOHN.

Gustavus, Trumbull Co., O., April, 1883.

I think it is a mistake about raspberry honey being poor, friend S. I think it quite likely that the one who wrote the article had got some apple-tree or dandelion honey in place of it, as raspberry blooms at the same time as apple-tree and dandelion. That from the latter is always dark and poor, if I am correct. I am glad to have you bring out the point, that honey-dew is not always dark and bad, and very likely it had something to do with your loss of bees.

ANOTHER DISEASE OF THE BROOD.

I should like to call attention to a brood disease that has nearly ruined bee-keeping in this part of the country. It is so insidious and obscure that it has not been noticed by any one else, so far as I know, till I called attention to it. The young bees die in every stage, from the egg to the perfect bee just emerging from the cell. But I am not aware that the adults are affected by it. It seems to be very slow in its progress; and as I noticed it for the first only last summer, I can't tell yet how long a colony may be affected and survive.

In the early stage of the trouble, the dead seem to be promptly removed; but after the worker force becomes much reduced, the dead can be found in all parts of the brood-nest. But all do not die; even to the last, some come out apparently healthy, till eventually the stock is weakened so that it is devoured by the moth, or perishes of cold in the winter. So far as I have been able to observe, it is attended with very little, if any, offensive odor. I have tried starvation, salicylic acid, salt, sulphur, etc., without any apparent effect. I also quarantined an affected colony for 36 hours, as recommended for foul brood, and then put them on new foundation with pure surroundings, and fed with syrup of granulated sugar; but they carried the plague with them in its most virulent form.

I am now satisfied that I have had it amongst my bees for more than twenty years, and that it has reduced my apiary from more than sixty strong colonies to three weak, worthless hives. I have no doubt it is one of the types of foul brood of which you speak, page 93, in the A B C. I think I have reason to believe that this trouble prevails to a great extent in Western Pennsylvania and Eastern Ohio, and perhaps elsewhere. But it is so obscure that it would hardly be noticed, except by the most careful observers. I wonder if it would surprise my old friend (and your correspondent), D. Binny, Esq., of Addison, Michigan, to inform him that this disease is what destroyed his apiary when he resided in these parts. Has friend Muth, Jones, Cook, or any other of your readers, noticed this form of "Blasted Hopes"? If any one is acquainted with it, and can give a remedy, or any information on the subject, I shall be pleased to hear from him.

MILTON HEWITT.

Perryopolis, Fayette Co., Pa., April 6, 1883.

I do not think I have ever met any thing quite like the above, and hope it is confined to one locality, and not contagious. Can others throw any light on it?

We have a pretty slim story to tell this spring. Every one around here has lost heavily, several losing all they have.

SUGAR SYRUP VERSUS NATURAL STORES, AGAIN.

One man started last fall with 25; has 5 left. Another had 9; has one left. Another had 10 or 11; has one left. M. L. Spencer had rather better success; he thinks he will save 50 out of 65. For myself I have 4 out of 16; one is very weak, which will be no profit if they live. Our imported queen you sent us last fall has gone with the rest. I think I have learned something in regard to wintering. I had one swarm that I extracted all the honey from last, and fed up on sugar syrup; then buried *a la* Hutchinson. They came out strong, and perfectly free from disease, as far as I can see. They did not show more than a teacupful of dead bees on the bottom-board. I buried 9 in all; lost 4 of them, one of which was drowned out, or smothered, water coming up above the entrance before I knew it. I had 5 out, buried in the snow, all of which died. All had dysentery. Another point: Those 5 had no honey taken from them last season, and it was badly candied in the combs; those that came through were fed up with syrup, when they needed it, and I extracted from them last season a good deal too.

H. D. BURDICK.

Little Genesee, Allegany Co., N. Y., April 14, 1883.

HONEY-DEW BAD FOR WINTERING.

I have come to the conclusion, and I now think not to change from it, that when bees get their stores from the woods in the fall, dysentery must surely follow. It has always done so with me, except last year, when I had one colony of Italians that gathered late, and had their hive pretty well filled with bark-louse honey, which came through all right; and I might here say that that hive caused me to risk 20 colonies this season, forgetting, of course, that last winter was very open, and bees flew nearly every week. Therefore let all bee-keepers rear a pillar right here, that where stores come in such profusion from the timber, in the fall season, and such stores are dark and strong, bees must have their winter stores from white clover, linn, or some early, healthful, white honey or granulated sugar, or have a bee mortality. The loss must be large in this locality, and wherever the so-called honey-dew was gathered.

ITALIANS MORE APT TO GATHER HONEY-DEW THAN BLACKS.

My black bees are not so badly affected as my Italians, nor have they ever, to my recollection, suffered so greatly. The reason is, the Italian is not so choice in his selection; or, in other words, the black wants the best or none; when the Italian can not get the best, he takes the next best, and so on.

Jerome, O., Jan. 24, 1883. R. MCCRORY.

WOODEN RECEPTACLES FOR HONEY; HOW TO MAKE THEM IMPERVIOUS.

I expect to have a honey-tank made of wood; can it be painted on the inside without injuring the flavor of the honey? M. A. JACKSON.

Bangor, Ia., Apr. 17, 1883.

Do not by any means have your tank painted inside, friend J., but coat it well with *hot* paraffine. Be sure that your tank is not only perfectly dry before you attempt to apply the paraffine, but that it is also as warm as you can get it—either by a fire or in the hot sun. Paint would be very apt to materially injure the flavor of the honey. The method of coating the inside of honey-barrels has been so fully described in A B C that it seems hardly best to repeat the process here.

CAN BEES BE MADE TO SWARM TOO EARLY?

An A B C scholar wants to know if there is any danger of feeding too strongly this month. It is wonderful to see how my bees dive into the rye meal and molasses. Is there any danger of their wanting to issue swarms before bloom comes, to enable them to work and live? A bee-man told me there was; how is it? J. W. C. GRAY.

Atwood, Ill., March 16, 1883.

I don't think there is any danger of swarms too early. I know there are some who think it not advisable to have very many bees before the honey comes; but my experience has always been most favorable with the strongest colonies. If I could feed bees so as to get them swarming in March, it would be exactly what I should want to do. If they were not ready to gather honey, I could do just as well in selling them by the pound. We have now, as we have almost every season, orders for bees at $4.00 a pound, and have not bees to fill them. Would not this pay, friend G.? If any one should have too many bees in April, it seems to me he could very easily get rid of them by a little advertising.

MACHINES FOR NAILING FRAMES TOGETHER.

On page 61 of your February number friend Hunt gives us a sketch of a block to nail frames on; and as I know they are very handy for one who makes his own frames, and that bee-keepers generally wish things handy, I will tell you how mine is made. It is the same as his, only in place of the buttons which he has to turn every time he makes a frame, I use a little wooden spring; a straight-grained piece of pine is best, for it keeps its place better than hard wood. By the use of the springs, all you have to do is to shove your end-pieces from the bottom up in place; and when the frame is nailed, take hold of the bottom and lift it out. When my frame is in it is a trifle fuller than the block, which makes it handier to nail.

MAKING FDN.; IS IT MONEY-MAKING BUSINESS?

I make every thing I use in the apiary, excepting fdn. That, I have to buy or get made. I have now 22 lbs. of nice wax which I am going to have made on the Given press. The man who owns the press asks me 25 cts. for making it; is not that a big price? I read in GLEANINGS that two men will make from 100 to 200 pounds per day, which looks like big wages—$25.00 at least. Now, friend Root, do you think it is just right for one bee-keeper to charge another such prices? It doesn't look so to me.

R. P. LOVEJOY.

Greig, Lewis Co., N. Y., Feb., 1883.

Friend L., if you think the manufacturers of fdn. are getting rich so fast, why do you not get a mill and get rich too? In the A B C I say that two hands may dip 200 lbs. a day, and also that two hands more can roll about the same amount. This would make four hands. Now, aside from this, considerable time and expense are required to keep the utensils in order, slick up, and put things away, and many other little incidents that come up in our wax-room. We turn out about 200 lbs. a day, and we employ about two men and perhaps half a dozen girls besides. This includes putting paper between the sheets, boxing, unloading wax, weighing, and many other little details. Our wax now costs us from 38 to 40 cts., after it is freed from dirt and impurities. We get on an average, perhaps 50 c., after paying for boxes, paper to put between the sheets, etc. This gives about $20.00 for the day's work. The wages we pay would be from $8.00 to $10.00, and we have $10.00 left to pay for room and machinery, interest on money, etc. Do you think it pays very much better than most other industries?

FRIEND MALONE'S FOOT-POWER SAW.

As I have that foot-power saw at work, I thought it might be of interest to some to tell how it is made, if I can, and how it works. The frame is made of 14 pieces, 3x4 seasoned hickory. It is 30 inches wide, 48 long, and 38 high. There are 4 pieces around the top, 4 around the center from top to bottom, 4 posts, and 2 lengthwise on top for mandrel to rest on. Then there is a frame made of 1½x1½-inch stuff just like the top of frame, to lie on top. This latter is fastened at one end with hinges to the frame, and the other end to raise or lower. There are 2 tables, one on the left hand, stationary, 15 inches wide, and one on the right-hand side, that runs on tracking. There are two gauges, one on the left for rip, and on the right for cross-cut. The wheel is 39 inches diameter, 6-inch rim, and 3-inch face. This gives the saw 20 revolutions to the wheel's one. The wheel is hung on an iron shaft, one inch square, bent for crank. It runs on steel points, with set-screw, just like the $2.50 mandrel. This part is where I think I beat friend Hutchinson. There are no heavy bearings, and it runs like a top. It cost me $10 00 in money and $12.00 in work. An old wheelwright made it for me. WM. MALONE.

Oakley, Ia., Feb. 11, 1883.

CHICKENS IN A BEE-YARD.

Have any of the fraternity ever tried keeping chickens in the same yard with bees? Will the chickens eat the bees? Will the bees sting the chickens? Is there any other objection? I should like an answer from some one who has tried it.

New York, N. Y., April 18, 1883. F. D. CLARKE.

Yes, friend C., I have tried to keep chickens in a bee-yard, to my sorrow. Ours never ate the bees, that I know of, but we have pretty conclusive evidence that chickens sometimes *learn* to eat them. The trouble they made with us was in tearing up the sawdust in front of the hives, and scratching things right and left generally. Then there is one other feature that is pretty disagreeable, to me at least. When I work at a bee-hive I often get down on my knees, or sit on the ground. Well, where one works that way, it is not pleasant to have chickens about, you know. I presume there is something to be said on the other side. A pet chicken can easily be taught to pick up all the moth-worms that are brought out of a hive, or to grab them up quickly when the bee-keeper pushes them out of the combs, etc. Perhaps some of the brethren have had a different experience from mine.

CHAFF PACKING, ETC.

It has been a hard winter on fruit-trees and bees. March was cool; April 16th was the first I noticed bees carry in natural pollen, but they are busy today on flour. I was late with building my bee-house, and it was quite damp; put in 35. Feb. 28 was nice. I gave them a fly, put them in again, and took them out April 9; all lively but 2; 9 packed in chaff appear to work as well as any. About one-half are on summer stand unpacked, but with a windbreak. Lost five of them. I think I should have lost less if a two-inch hole had been in bottom-board, as they were strongest. E. PICKUP.

Limerick, Ill., April 17, 1883.

REPORT FROM MRS. AXTELL.

Our bees wintered very poorly, both in cellar and out of doors; never in better condition than they were in last fall, but will, we think, have all left we can well care for in two apiaries, and the nice combs left by the dead colonies are worth nearly as much for young swarms as if sold last fall, at present prices of honey and bees. We wintered in cellar about 150 colonies, instead of 15, as per Apr. No. If any fault in wintering on our part, it was too many bees in one cellar; but it was kept well ventilated. One of our Chicago commission men visited us yesterday; he says, "Tell them, 1-lb. sections are *just right*, but don't by any means make any smaller."

Roseville, Ill., April 18, 1883. L. C. AXTELL.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

ENCLOSED please find —— —— for which send me GLEANINGS, and oblige your friend and brother bee-keeper, who is in Blasted Hopes now. Last fall I had 38 good strong swarms of black bees. The winter was very severe here, with 3 feet of snow on the level. My bees did not have a fly from the 11th of Nov. until about the last of Feb., and the weather still continues cold, with lots of snow on the ground. I had 32 swarms packed in fine dry oat straw, 6 inches thick all around the hives, with entrance open, honey-boxes filled with dry straw, and placed directly over bees to collect moisture; 6 inches of straw over hives, and a good shingle roof over each one; 6 swarms I left unprotected.

RESULTS.

Those 6 unprotected are all *dead*; 14 of those packed in straw, *dead*, leaving only 18 live ones, and most of those rather weak. My hives are 20 in. long, 12 high, and 12 wide; the 2 swarms in old-fashioned box hives, packed same as the rest, came through splendid. LEMMON W. ITZENHOUSER.

Coral, Montcalm Co., Mich., March 30, 1883.

Why, friend I., it doesn't seem to me you need to be in haste to get into "Blasted Hopes," for you have done better than we did, as it is. I think your old box hives had old tough combs, and had ample time to prepare themselves securely for winter, while those of the other hives were new colonies built up last season.

BLASTED HOPES.

Blasted hopes! blasted hopes! On the 5th I wrote you a letter, and inclosed subscription for GLEANINGS, to commence April 1. I had not yet mailed the letter on the 6th when I went to give a hand to the bees, when, lo! out of my 11 *good* swarms I had not a live bee left. I felt all broke up in the business, and did not know which way to turn. Then I happened to think of friend Root as the man to help me out, and so I inclose you the subscription in this letter, and want you to sit down and write me a long letter to tell me how to start again, and to encourage me before I declare bee-keeping a fraud. We have 25 *empty* hives, 12 of them filled with old comb, containing irregularly about 200 lbs. of honey, for do not think my bees starved. I have also an extractor, smoker, sections, etc., purchased of friend Root, and every thing necessary to bee-keeping, but *no bees.* Now tell me how you can give us a start, and with what stock you would advise us to start with; for we are thinking of buying of you. You see there is no use in buying bees in hives, as we have plenty of hives now; but what we want is *bees.* Give us your advice. BERT E. RICE.

Attica, Seneca Co., O., April 10, 1883.

Is it really a fact, friend Rice, that your hopes are *blasted?* Is your courage and energy all gone too? and do you still feel all kind o' broke up like? I can hardly think you are so badly off as you suppose. Is it not a hallucination that you are laboring under? Charles Buxton one said, and I think, too, he must have been talking to some poor fellow who almost thought his hopes were blasted, "The longer I live, the more deeply am I convinced that that which makes the difference between one man and another, between the weak and the powerful, the great and the insignificant, is *energy, invincible determination;* a purpose once formed, and then *death or victory.* This quality will do any thing that is to be done in the world; and no two-legged creature can become a man without it!" There! doesn't that make you feel a little less "broke up"? Here is Moody's favorite verse that will certainly help to dispose of blasted or blighted hopes.

> For the Lord God will help me, therefore shall I not be confounded; therefore have I set my face like a flint, and I know that I shall not be ashamed.—ISA. 50 : 7.

Hasn't that got the true ring of *manliness*, as well as of godliness, friend R.? and then, you know, Paul said he had learned, in whatsoever state he was therewith to be content. But do you think this is too etherial or theoretical? Then let me give you something else for your encouragement that is perhaps of a more earthly nature.

By my side sits one of our good bee-keeping friends who is spending a day or two looking about our institution, making it pleasant for us, and perhaps for himself too. It is Mr. McGee, the lighthouse keeper at Point Marblehead, O. Now, *he* can sympathize with you. He says that two years ago he lost all of his bees except one queen and a half-pint of bees in one hive, and one queen with a pint of bees in another. He had 106 frames of comb — about the same as you have. He bought no bees nor queens, but by careful management of what he had, he increased to 11 strong swarms, all of which were wintered, and took 369 lbs. of honey besides, 25 lbs. of which was nice comb honey. There, now, isn't that encouraging? and is it not the more encouraging from the fact of its not being an item that I have selected from all the back volumes of GLEANINGS, but that it is the first one that comes to hand?

And now for advice — taking it for granted that your feelings are entirely healed. If you haven't very much cash to spare, just get two or three queens with half-pound or pound of bees with each, and start as friend McGee did. Your combs with some honey in them are exactly what they want for a start in house-keeping. Pack your combs where neither bees nor mice can get at them. They should be hung at least 2 in. apart, and watched, that the moths do not get in and make havoc; and I am sure that, with a little ingenuity, and perhaps some strategy, you will have quite an apiary in the fall. We shall want to hear of what success you do have, any way. Would advise you to get untested queens and a pound of bees with each in May; these will cost you $1.50 each for queens, and $3.00 per lb. for bees. Since you live in Ohio it will do very well for you to order of us; but if you were further away, I would advise you to buy near home, if you can handily, so as to save express charges. Still, if you can get good swarms near home, and buy Italian queens of some dealer, it would be a saving. Many of our reports show great success from 1 lb. of bees and queen in May. Not only will they make a good heavy swarm, but will generally yield a considerable quantity of honey, if they are not used for increase. I see you sign yourself "in need of sympathy." Now just turn to my spring's report on page 202 of April GLEANINGS, and I am sure you will allow me to say that *I am* yours in sympathy.

Medina, O., Apr. 18, 1883. WALTER B. HOUSE.

Reports Encouraging.

FROM 17 TO 44, AND 1600 LBS. OF HONEY.

I STARTED in the spring of 1882 with 17 colonies; 2 lost their queens, and 2 were weak, and increased to 44; I got 1600 lbs. of extracted honey from 14 colonies, and 500 lbs. comb honey from the rest. I put 44 in cellar the 28th of November; took 38 out this spring; 31 are strong; the rest are weak from dysentery; 6 died by the same disease. AUGUST L. LEHMAN.

Hustisford, Wis., March 28, 1883.

The first year that I received my bees we took 160 lbs. of honey from each hive (chaff), and they have done well ever since. W. A. SMITH.

Denver, Col., Feb. 27, 1883.

The spider plant and Simpson honey-plant both did extremely well with me last year. I, too, gathered honey from the spider-plant with a spoon.

Kossuth, Miss., Mar. 7, 1883. W. C. HARWOOD.

FROM 14 TO 30, AND 1800 LBS. COMB HONEY.

I started with 14 colonies, and increased to 30; obtained 1800 lbs. of honey, all in sections, 1 and 1½ lbs. A. REUCH.

Chariton, Lucas Co., Iowa, Feb. 24, 1883.

FROM 1 TO 8, AND ——

It has been a hard winter for bees. I started with one swarm last spring and increased to eight. Last fall I united 4, and have 6 good ones now. Bees brought in pollen the 16th. A. R. WHITMAN.

Norway, Me., April 18, 1883.

Results of one year with one swarm: 64 lbs. of box honey; sold some at 20 and some at 18 cts.; worth in all about $27.00; cost me about $18.00. Profit, $9.00, and one swarm. I am satisfied. I have tried bees before in gums and board hives, but failed every time. I think GLEANINGS is worth more than it costs, so it is a well-spent dollar It is good in every department—certainly on tobacco.

Cuba, Ill., Mar. 20, 1883. M. W. MURPHEY.

FROM 1 TO 5, AND 50 LBS. OF HONEY.

One colony increased to five, and I got about 50 lbs. of honey, from one stand. I think I shall do better this season. F. P. Smith.

Greenwood, W. Va., March 24, 1883.

Our bees have wintered nicely so far on the summer stands packed with chaff. Loss so far is 7 out of 175 swarms put away last fall. N. E. Prentice.

Castalia, Erie Co., O., March 20, 1883.

Very glad indeed to hear it, friend P.

FROM 8 TO 22, AND 1000 LBS. HONEY.

I had 8 stands last spring — one queenless; now I have 22 strong ones, and 3 ran away. Got 160 lbs. of extracted and 840 of box and section honey, mostly section. Stephen Julian.

Russell, Iowa.

I will give you my report for the past season. I commenced the season with 20 swarms; have now 49; have taken 1600 lbs. in box honey; most of it was white-clover honey. Bees are in good trim for winter. S. Pardee.

Volga City, Iowa.

FROM 1 TO 3, AND 100 LBS. OF HONEY.

I got 100 lbs. of honey last season from one hive and two swarms. I put them in store boxes, with straw and leaves around them. They are all in good shape. D. J. Coate.

Laura, Miama Co., O., March, 1883.

FROM 25 TO 50, AND 3000 LBS. HONEY.

My bees did well this last year. I began with 25; increased to 50, and got 3000 lbs. honey—1800 in 4¼x 4¼ sections, the rest extracted, and think I could have extracted 1000 lbs. more, and left my bees plenty for winter. J. W. Lamb.

Champaign, Ill., Mar. 19, 1883.

FROM 12 TO 46, AND 200 LBS. HONEY.

Here is my report: I had 12 colonies of Italian bees in the spring of 1882; increased to 46, and sold 200 lbs. of comb honey, and I have sold 3 colonies at $10.00 per colony, which leaves me 43 all O. K. Chaff hives are good for cold winters with Italian queens from P. L. Viallon. Robert Blacklock.

Geigerville, Carter Co., Ky.

In the spring of 1882 I bought a very weak colony for $7.00. last fall I sold the same for $7.00. I obtained from that colony $30.00 worth of honey, and three good colonies of bees worth now $30.00. So my income from $7.00 was $60.00, and a good deal of experience. I have five colonies; Gallup hives, all in chaff, and so far are doing well. J. L. Hughey.

Carroll, Ind., April 9, 1883.

FROM 3 TO 16, AND 175 LBS. OF HONEY.

I received the smoker you mailed Apr. 6, yesterday; have tried it to-day; am well pleased with it. Thanks for your promptness. I had 3 colonies of bees last spring; increased to 9, and extracted about 175 lbs. honey; lost 2 — one in winter and one this spring, from carelessness, I suppose, in not feeding. A. J. Lane.

Rich Creek, Marshall Co., Tenn., April 14, 1883.

FROM 2 TO 4, AND 100 LBS. HONEY.

I commenced last summer with two colonies; increased to 4 in the fall; had my best one stolen when full of honey; extracted over 100 lbs. of honey. I bought 17 colonies in the fall; extracted the honey from them: fed them sugar syrup, packed them away in sawdust, and at the present I think they are all alive. E. J. Haines.

Cheltenham, Ont., Can., Feb. 27, 1883.

FROM 80 TO 135, AND 6500 LBS. HONEY.

Dec. 5th, I received Gleanings containing notice that I had honey for sale; and on the 6th I received a letter from Michigan, inquiring about the same. How is that for quick returns from advertising? My report for 1882 is, spring count, 80; full count, 135; extracted honey, 4000 lbs.; comb honey, 2500. Total, 6500 lbs. Yield per colony, 81 lbs. Increase, 70 per cent. J. L. Gray.

Lee Center, Ill.

FROM 17 TO 27, AND 1700 LBS. OF HONEY.

I had thought of sending in my honey report; but as I had only 1700 lbs. comb honey and 10 swarms from 17 stands, spring count, and as I see so many reports that far exceed it, I will say nothing more about it, only that, if I could be sure of doing as well every season, I should be satisfied. G. W. Cole.

Canton, Ill., Jan. 8, 1883.

I dare say, friend C. Seems to me I know of "whole families" that would be satisfied with 100 lbs. to the colony, and over one-half increase.

FROM 10 TO 34 AND 1500 LBS. OF HONEY.

As I never have given you a report of what my bees have done, I thought I would send one. Spring count last year, 10; increased to 34. Took 1500 lbs. comb honey. Sold by the quantity for 18 cts., and small lots for 20 cts. per lb. Wintered on the summer stands. Lost two; the rest are good and strong. I am selling at $5.00 per colony; want to reduce them to 15 stands. I have not room for any more. I live in the corporation. My lot is small to keep so many bees. W. D. Angell.

Odell, Livingston Co., Ills , April 5, 1883.

FROM 39 TO 62, AND 6324 LBS. OF HONEY.

I have delayed my report for reasons mainly on account of sickness. I began the season of 1882 with 39 colonies; increased to 62; sold 4 Simplicities at $10 each; 1 chaff at $10.00. Went into winter quarters with 57 colonies — 49 in chaff hives, and 8 in Simplicities. All in chaff wintered well. One in Simplicity *starved* on candied honey. Our honey product was an average of 102 lbs., spring count,—all extracted, and we enter the season of 1883 with 56 colonies in good shape at this time. Price of comb honey, 25c; extracted, 20c. R. H. Rhodes.

Arvada, Jeff. Co., Col., Mar. 31, 1883.

FROM 7 TO 28, AND 2500 LBS. HONEY.

Here is my report for this year. Began in spring with 7 colonies in chaff hives (no loss). Extracted, 2000 lbs.; in 1-lb. boxes, 500 lbs. Sold extracted at 11 to 12c; box, 15 to 18. Increased to 28 in Simplicities, now covered with a pile of straw on each hive. I prize Gleanings very much; count "Our Homes" worth at least half the journal. Am much obliged for the Juvenile. You are doing a good work, friend Root. I am hoping and praying God to spare you, and show you much fruit as the result of your labors of love. I began with one swarm four years ago. Alfred Mottay.

Ottawa, Ill.

FROM ONE TO FOUR, AND 75 LBS. OF HONEY.

I commenced the season of 1882 with one stand, and increased by natural swarming to 4 — two in American hives, and two in box hives; got about

75 lbs. of box honey (this was my first season). I fed the last and smallest swarm last fall; the rest wouldn't eat any. I suppose they had plenty of honey. I wintered them on the summer stands; they all came through the winter in good condition. I commenced feeding in March again. That is the small swarm, and have kept it up till the present time. I see they are bringing in pollen this morning at 10 A. M. already. It is of a light yellowish color; where do they get it? They are working on the soft-maple now, but I thought that was of a reddish color. Need I feed them when they get natural pollen?

Wyandot, O., April 10, 1883. J. T. HOOVER.

I think the pollen is from the maple, friend H. I think when they get natural pollen they also get some honey, and will therefore not need much feed.

FROM 6 TO 20, AND 200 LBS. HONEY.

I will try to make out my report for last summer and winter. I began last spring with 6 colonies of bees (Italians). I ran them for increase mostly. I increased by natural swarming to 20; sold 3 colonies; got about 200 lbs. comb honey. My best colony made me $20.00 in honey and increase, and have the old hive left. We had a rather poor season; plenty of flowers, but too much cold wet weather. I had to feed a little in the fall. I went into winter quarters with 17 colonies in pretty good condition; part in cellar and part on their winter stands packed in straw. I use tight-bottom hives (Simplicity). I don't give any top ventilation; the entrance of my hives is 6x½ inch, and a 1½-inch hole in bottom, with wire cloth tacked over it. I think this is ventilation enough. I unpacked my bees yesterday, and to-day they are carrying in pollen. I take great pleasure in watching the little fellows at work. I forgot to say that I did not lose any bees in wintering. I find every colony able to "clean house."

A. C. WILLIAMSON.

Matamoras, Ohio, April 9, 1883.

FROM 49 TO 141, AND 8 TONS OF HONEY.

In looking over GLEANINGS I notice that a great many bee-keepers give their reports for 1882. I will give you mine as nearly as I can. As I had my bees divided into two apiaries, and labored under considerable disadvantage, I had to estimate the weight of honey by the barrel. I started, spring count, 49 stands; I ran 5 stands for section honey most of the season, or until I got about 500 lbs. of section honey. I then put on extracting-boxes, and ran them the rest of the season for extracted honey. When the season was over, I summed up the amount I had, 32 barrels of extracted honey that would average 550 lbs. to the barrel, or something over 8 tons of honey. I increased to 141 stands, and lost 5 during the winter, and that through neglect. The rest appear to be in good condition. My honey all sold principally in home market, at an average of 8 cts. per pound; section, 20 cents. JAS. A. SIMPSON.

Alexis, Warren Co., Ill., April 8, 1883.

FROM 50 TO 89, AND 12,290 LBS. OF HONEY.

My report for 1882 is this: The first of June I had 50 colonies of bees, all told; increased to 89, and took 12,290 lbs. of honey, nearly all extracted, and all white, except 250 lbs. of fall honey (the fall crop here being a failure), being an average of very nearly 246 lbs. per colony, spring count. The above figures were obtained by weighing one barrel of each different size; but as most of the honey is in 500-lb. bbls., the figures should be very nearly correct. I should like to add a word about making reports, that I should like to see adopted. If a person winters, say 100 colonies, and in the spring doubles them together down to 75, saving the 25 queens in nuclei, let him report the fact, and not overlook the 25 extra queens, as in a good season they mean a good many pounds of honey.

A BIG DAY'S WORK OF EXTRACTING.

As several have reported big day's work extracting, I will add mine. On the 25th of July last, I pressed a young man into the service, who knew nothing of the business. We drove four miles to a branch yard, and extracted ninety gallons of honey, filling two barrels, and left 60 lbs. in the extractor, making about 1140 lbs. The brood-chamber of every hive was examined, queen-cells removed, and frames of hatching brood taken from those likely to swarm, and new swarms built up with the brood taken. The young man did all the extracting, and went home feeling proud of his day's work, even if he did have two or three pretty big fingers, that had shut down on some unlucky bee. JAMES NIPE.

Spring Prairie, Wis., Dec. 8, 1882.

Notes and Queries.

I OUGHT to add a postscript to my article; for since sending it I have contracted to supply a man with 100 lbs. of bees, which comes from my ad. in last June GLEANINGS. T. P. ANDREWS.

Farina, Ill., April 19, 1883.

Photo is received; many thanks. I feel as if I knew you better. Bees are swarming every day; am extracting right along from poplar.

Forsyth, Ga., April 21, 1883. F. N. WILDER.

I will report my success (not failure) to you at some future time; also the "Golden bee-hive" swindle in this country. OMAR P. WHITE.

Nebo, Cherokee Co., Tex., April, 1883.

FIGWORT PLANTS 9 FEET HIGH.

Last summer we had figwort stalks over 9 feet high, and M. O. spider plants 6 feet high.

CHARLES L. SWARTZ.

Rinkerton, Va., Mar. 3, 1883.

NEW HONEY.

The honey-knife and GLEANINGS came to hand all right. I like them both very much. I have taken 1000 lbs. of very nice clover honey from 30 hives — extracted. H. B. MORRIS.

Franklin, La., April 13, 1883.

ASPARAGUS FOR BEES.

I have nearly half an acre of asparagus, and bees work on it for weeks until the seeds set on it.

JOHN H. MYERS.

Saratoga Springs, N. Y., Feb. 9, 1883.

I began with 10 colonies of bees last fall; lost 4. You may be sure I had the blues some.

Charlotte, Mich., Mar. 14, 1883. T. RICKERD.

[Why, friend R., I wouldn't have the blues because I had lost four out of ten. With those left you can get them back in no time.]

BEES IN FLORIDA.

Bees are working well; have increased from 8 to 24 colonies of blacks and hybrids since Feb. 1, 1883.

Orange City, Fla., Apr. 11, '83. Dr. H. S. Allyn.

My bees are carrying in pollen from the alders. That is the first thing they have to work on, and I tell you it comes in well, because it comes so early. In a few days the maple-buds will be out; then comes the first honey of the season. L. R. Webb.

Salisbury, N. C., Feb. 18, 1883.

GOOD REPORT FOR CHAFF HIVES.

I have lost but 4 out of 50. Four were put in cellar; lost two; 46 were packed in chaff on their summer stands; lost two; all very strong, and will want Gleanings to help me take care of them.

J. H. Wagner.

Hudson, Steuben Co., Ind., Mar. 19, 1883.

I see ½-lb. sections are fashionable. Just put a hypothenuse in 4¼ sections, and you will make two three-cornered sections, and they are so perfect a brace that they will stand throwing at rabbits, in a pinch, after bees propolize them, and they exactly fill your surplus supers. J. W. Clark.

Moniteau, Moniteau Co., Mo., Mar. 24, 1883.

BEE-CAVES.

I have to blast into the caves here to get honey and bees to start with, but haven't much time for it, as it takes some time to drill into the rock so as to put in the blast; so I am going to try to have my bees at home, where I can attend to them easier.

Wm. S. Stoner.

Bullhead, Edwards Co., Tex., March 3, 1883.

I have 22 acres in fruit of every description, besides hundreds of varieties of shrubs, roses, etc. I think it would pay me to have a few bees; and as soon as I can spare the money, I will make a start; but I am fearful about the result, as I know no more about bees than a hog does about Sunday.

Sam. Marshall.

Ladonia, Texas, March 26, 1883.

BEE-SMOKERS AS VERMIN EXTERMINATORS.

I have just received two smokers for my small apiary, and for one of my neighbors, and still two other neighbors wish me to send for them to use with tobacco in them, to kill vermin on their house-plants. For this they are a perfect success.

George Pattee.

Ackley, Ia., March 5, 1883.

FRIEND BANNON'S NEIGHBORHOOD.

My bees are in very bad shape. I have not time to attend to them; if I had the time, I think I could get lots of honey. There are men here who keep bees, and have lots of time to attend to them; but they were "born tired;" they are loafers, and don't have to work. I would just like to have time to try my hand this summer. James Bannon.

Archie, Venango Co., Pa., Apr., 1883.

HONEY VINEGAR; HOW TO MAKE.

To R. J. Fox, Natick, Mass. To make honey vinegar, we rinse our cappings after they have drained; also broken combs that contain honey; settle well; then drain carefully. Then place it where it is warm. It will not pay to take nice honey for vinegar; it will take 3 lbs. to the gallon for a good article that will not dye the washings of all your implements that have honey in. Waste nothing. D. L. Bular.

Wauseon, Fulton Co., O., April 2, 1883.

DO BEES GATHER BOTH HONEY AND POLLEN AT THE SAME TRIP?

I am convinced that bees carry honey and pollen at the same time. I was in our orchard the other day, and saw the bees, after they had got a load of pollen, boring their bills down into the peach-bloom until they were filled with honey, and off they would go to their hive. J. E. Tharp, Jr.

Eagle Mills, Iredell Co., N. C., April 9, 1883.

HONEY FROM TOBACCO.

As the frost was late last fall in coming, tobacco-suckers nearly all bloomed, and the way the bees went for them was a caution, and it was good honey for fall honey; but then, you are so opposed to the stuff, I don't believe you would hardly like it; but I will agree with you this far: I don't hardly think it would pay to raise tobacco just for the honey, though I have good reason to believe my bees got considerable honey from it this fall. Geo. W. Stites.

Spring Station, Ind., Dec. 25, 1882.

SCRAPING WIRED FRAMES (PAGE 137, MARCH NO.)

I gauge the top and bottom-bar; then I can make the holes for wire in the middle of the frame. The wires are drawn in gauge-mark, and tight, to spring up bottom-bar, which is thinner than top-bar. There is no touching the wire with the scraper, should the bees soil the frames in winter and need scraping.

J. Lewelling.

Spiceland, Henry Co., Ind., Mar. 30, 1883.

[Thank you, friend L. Your plan is so simple I am ashamed to think we never thought of it before. One of our 5-cent gauges will draw a line sufficiently deep, without any trouble.]

BEE GLOVES OF STARCHED LINEN, ETC.

How will those starched linen gloves work when the thermometer is about 90 in the shade? If the sweat runs off from the person who wears them as it does from me when I take off honey, I rather think a sting would go through; but I find no use for gloves, except in transferring, as a good smoke, and plenty of honey coming in, is the best preventive I know of for stings. J. H. Myers.

Saratoga Springs, N. Y., March, 1883.

[I quite agree with you, friend M., only "a little more so." If I wanted to hire a bee-keeper, and he went to work with gloves on, I am afraid I shouldn't have a very high opinion of his ability.]

SEEDLING BASSWOODS.

You spoke last spring of getting a quantity of H. M. Morris' seedling basswood-trees. Did you get them? And if so, how did they succeed?

WATER FOR BEES.

You say in last Gleanings that honey seems to contain water enough for bees, and yet they sometimes die without more. Probably if perfectly healthy they will be all right; but if diseased a little, and feverish, then they need more. Don't you think so? Burdett Hassett.

Howard Center, Iowa, Mar. 10, 1883.

[All the seedling basswoods that friend Morris could spare were sent directly to customers to fill orders. So we didn't try any. Will those who tried them please report?—Perhaps you are right about the honey, that it contains water enough for bees in a state of health, but that they need more when confined to the hive by weather, or when out of health from other causes.]

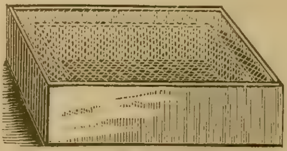
Our Homes.

If ye then, being evil, know how to give good gifts unto your children, how much more shall your Father which is in heaven give good things to them that ask him?—MATT. 7: 11.

JUST at this season of the year it is often desirable to build up a colony of bees by feeding. I wonder how many of the friends know how to do this, so that your pains and feed may not prove a mistaken kindness. The novice, in his attempt to feed, will often only get stung for his pains, and then not succeed in getting the bees to take the feed at all. After he gets them to understand that it is food he wishes to give them, if he gives them too much, or gives it in a careless way, they may let it run out of the hive, and start robbing, and thus prove the ruin of the colony, instead of a help, as he intended it. Even if he does not do this, he may give them so much at one dose that they get demoralized, and forget to keep sentinels posted, as usual, and robbers push their way in, and the result is as before. Instead of making the colony thrive and prosper, it is only led into war and discord, may be the loss of the queen, and ruin. If he feeds heavily when the weather is to cool for them to fly, they are often incited to fly out when they ought not, and so the bees that are lost amount to more than the extra brood raised. Well, suppose he does not feed too much or too fast, or during unsuitable weather, but keeps a regular rate of feeding, but from a feeder so small that they get it only about as fast as it is brought in from the fields in the natural way, will he succeed then? He may not get very good results, even then; for the bees often get a habit of hanging around the feeders all day long, without going out into the fields, as would other colonies not fed, and so a sort of laziness and idleness is sometimes fostered that defeats the very object of the feeding; and this has been the case so many times that some of our prominent bee-men have declared feeding to be, in the long run, more of a damage than a benefit.

Although I have given the above as an illustration, and to bring out a truth, it is none the less true in regard to bees and feeding. Before dropping the bees, and going on with my Home Talks to-day, it may be well to add that, to avoid these difficulties in feeding bees, I would, as a rule, feed them only during weather that permits them to fly daily (and, in fact, I would not feed at any other time, if I could avoid it); and I would feed them just at dusk, and give them only so much as they could take up without fail, before morning. They will then go to work next day, nearly the same as a colony not fed at all, and in some cases much better; and if the work is done judiciously, by watching the state of affairs in the hive closely, the colony may be built up so as to have an enormous force of bees ready for work, by the time honey is to be found in the fields. Some of the largest results ever attained with a single colony have been brought about by this kind of intelligent management. You see, the very heart and soul of the bee-keeper must be in the work, and then he can make the bees do almost any thing he wishes them to do. Shall we now drop the bees for a little while?

Is it really true that we take many of the gifts God gives us, about as the bees sometimes take their feed? How many of you have been stung when trying to feed the bees, and at a time they need it sadly too? Come to think of it, I don't believe I am yet quite ready to drop the bees in the way of illustration, after all. Last fall a good bee-friend came to see us, who lives in New Philadelphia, O. He brought along with him a small bee-feeder that his little boy was very anxious Mr. Root should see. You see, the father was a stone-mason, and had to be much away from home, and the work of feeding devolved on the boy. The way he fed was to have a little wooden box set in the upper story of the hive; and when it got empty, the boy was to go around, raise the covers of the hives, and fill up the feeders. I presume many of you know how it was. All the gratitude the bees showed him for his kindness in giving them the food that was to save them from death by starvation was to sting him most unmercifully every time he came near them. It was really too bad, wasn't it, "Bub"? No wonder he cried. I believe I should have cried too when I was his age. Come to think of it, it was too bad. I wonder if any of the rest of my little friends have ever had any such like troubles. If they have, I can not wonder so much that so many of them say in their little letters, they "like honey, but don't like to get stung." Well, you know necessity it the mother of invention, and so our poor little friend whose pa was gone, feeling the responsibility of the apiary resting on his little shoulders, wiped his eyes and went and invented a bee-feeder. I will give you a cut of it below.



THE BOY'S BEE-FEEDER.

It is, as you see, only a large box, without top or bottom, except a top of wire cloth; and when this was placed over the little wooden box, our young friend could pour the feed right through the wire cloth, close up the hive, and not a bee come out to worry or trouble him. Of course, a hole had to be cut in the quilt or honey-board, to set these boxes over, or into, and then it was complete, and my little friend was so delighted with the result he wished his father to be very particular to carry one to me, and explain it fully.

Well, is it not true that God often sends us blessings which we in our want of faith and trust in him receive much as the bees received their feed? Is it not likely, too, that he would be many times glad to send us greater blessings, if he could do it without doing us harm instead of good? We all have an idea of what we think would conduce to our happiness; but are we sure our judgment is good in the matter? Look around you and see if it would be safe to give everybody all they are striving for. Do you see how many there are who want things that would be almost certain to bring them unhappiness? Well, have you an idea you are an exception to the general rule? About an hour ago I asked the boys and girls at the noon service what it was we needed most to-day. One of the girls replied, "Patience." The foreman of the saw-room whispered so that Mr. Gray heard him, "Dry sections." At this the foreman of the packing-room suggested faintly that we needed "some chaff hives." Then one of the printers said we needed some paper in the press-room, to print GLEANINGS on. I was glad to hear that all seemed most intent on the wherewith to make progress in the work that lay before them, and that their interest was my interest; or, in other words, that they might serve their fellow-men in a way that would be acceptable in God's sight. Reader, what do you need most now? Is it something for your own gratification, or something that might help you in your great work of serving humanity? Did you ever think the word servant was a pleasant word? It is a happy word to me. Jesus, my beloved master, was a servant, and therefore I feel it a great honor to serve, even in my own humble way. Well, most of us have an *idea* of what it is we need; but only God the Father *knows* exactly what we need. Are we willing to trust him? Are we satisfied he is studying our wants and best interests, just as a kind father studies the best interests of his children? Ernest is now home from college, broken down in health. We are discussing sending him on a visit among bee-keepers; and if he makes you a call, you will know why he came. We wish to have him get well and strong, that he may be a good and faithful servant; not a servant to his parents, but a servant of the bee-keepers of the world, and humanity in general; or, if you choose, a servant of God. We do not expect him to grow strong by having an easy time, nor does God expect you to grow strong by having an easy time always. Instead of sending Ernest to Florida, we have suggested to him the frosts of Canada, and a visit to our stout and sturdy old hero, D. A. Jones.

The question that tries our faith seems to be, Does God really notice all the little events of our lives? is he like a kind father, watching and studying us with our wants and needs? In this matter of serving that I have been speaking of, most of us are averse to being called servants. Quite often have people asked me if I supposed any of the women in my employ would be willing to do housework. After thinking of the matter a while, I usually told them that I rather thought they would not. Now, I don't propose to discuss the matter here, of how competent help can be obtained for household tasks, but I have been thinking it is not the girls alone, but mankind in general, who dislike the idea of being considered a servant; and yet the word when taken in the right sense, is a glorious one. The life of our Savior was one of continued service; and if we are to be followers of him, we too must serve; and God's plan seems to be to make us strong and good by requiring service at our hands, and continued services.

Last Sabbath our pastor spoke to us about the ladder of Jacob's dream; a ladder that started from earth, and that reached up to heaven. He said, that with most of us our lives might be considered ladders in one sense. We are all anxious to climb; that is, we wish to grow wiser and better as we grow older. We wish to do something in this world. Well, friends, is it not true, also, that God wishes us to do something? He wishes us to grow in every thing that is good and pure, noble and true. It seems to be his wish that we shall grow better and better, serving others rather than ourselves. Jesus once told his disciples, you know, that if any one would be greatest among them, he should be their servant. Now, is it not true that our greatest trials and difficulties in life come from our being unwilling servants? If we could have the faith to believe that God is always watching us, and watching us lovingly, could we not take up with the necessary duties that lie before us, with a better grace than we often do? He knows full well that these duties are often grievous, and hard to bear; but his wish is that we should come to him. How often he has said, in substance, "Come unto me, all ye that are weary and heavy laden"!

A few days ago I saw a little child playing with her blocks. She was piling them up, and standing on them. Her father told her she would fall. She didn't heed him, however; but pretty soon, down she went, with a tumble, and was evidently hurt. "There, I told you so," said he; "next time you must mind what I say." It was evident from the looks of her face that she was ready to cry; but with a determined effort she held back the tears, although her little face showed plainly the evidence of pain. What did she do? I will tell you. She scampered as fast as her little feet would carry her in the direction of where she knew her mother was, threw herself vehemently into her mother's lap, and that soothed the pain. Did she do well? To be sure, she did. In the same way God would always have us come to him. No matter if we have been disobedient and headstrong. When we get into trouble, no matter how the trouble came, our duty is to come to him, trouble and all, and lay it at his feet.

Now, when we look about us in the world we see many things that seem to contradict the idea that all things shall work together for good; and, in fact, the Bible does not promise that all things shall work together for good. The promise is only to those who love God. The most important,— perhaps I might say the only important thing in life,— is that we should love God. Don't you remember the text, "Seek ye first the kingdom of God and his righteousness, and all these things shall be added"? Of course, all these promises can not refer to a bad man, or even to a selfish man. They are only to those who seek to have their hearts and their whole lives right before God.

Those who, although they make blunders, are constantly looking to God for guidance, also hold themselves in readiness every minute to *obey* the very minute he may call or direct. We find in history, not only sacred but profane, that men are made great by trials. Joseph, you will remember, had a regular series of calamities, or whatever you would call them; yet we, with the story right before us, have no difficulty in seeing that these great trials were right, and working for his good; or, what is still more important, for the good of the people. Joseph was a cheerful, willing, patient, and obedient servant. His only wish in life was to please God. Again, we see the same thing illustrated in the life of David. In his boyhood he was all that one could admire; yet God wisely saw best to send him trials, and great trials.

The proof of David's greatness is, that he bore those trials so uncomplainingly; that although bound down with cares and sorrow and trouble and great burdens, he raised his heart to God, and looked to him, and *trusted* him through it all. Now, friends, the measure of our greatness is in our ability to bear trials, and still trust God. While saying this I would again call attention to my remarks of last month, to the effect that our troubles are of two kinds: The one kind that we bring on us by our own sinfulness, or, if you choose, our own foolishness. From the former we have nothing to fear, because our Savior has promised to stand between us and all harm from all such causes. From the latter we have every thing to fear; but even in troubles of this kind we have this to cheer us—God is always willing to forgive those who are truly penitent.

Another point comes in here: During the time of Joseph, David, and Paul, both civilization as well as true religion were at a low state. Persecution was the rule, and good, strong, faithful Christians were not scattered through every community, to come forward bravely and valiantly to take the part of those who were suffering for Christ's sake, as is the case nowadays. I have talked to you before about those who have much to say about a hard, grasping, unfeeling, and ungrateful world. My friends, it is not so. The world is not hard and unfeeling. We can rejoice that it is rather the other way. Willing, faithful servants of Christ, our Lord and Master, are found on every hand. If you have met with nothing but abuse from the world, it is surely because you have been selfish and abusive yourself. Through humanity you should see God; and if you have never seen the image of the Savior, it is because your heart is perverse and wicked. Many of you who read these pages know my past history pretty well. You know my trials and difficulties, as well as my joys and successes. Many of the trials have come through my own perversity. Perhaps some of them have been sent by the loving Savior because he would have me grow wise and strong. New trials are coming now, it would seem. How shall I bear them? If my heart is wicked, and my plans are selfish ones, the end will surely be failure, disaster, and perhaps ruin. If, in my own peculiar way, I have been trying to serve God and my fellow-men, and am still trying so to do, no great harm or calamity will come. If my purpose is right in God's sight, it will also be right in the eyes of all good men and women, and friends will not be lacking. Did you ever think of this? You will always have friends, and plenty of them, when you deserve them. When you don't have friends, and good, faithful ones in abundance, the probability is, it is because you, by your own foolish acts, have forfeited all right to them. In this way it is, I think, that the promise is, in a measure, fulfilled, that all things shall work together for good to those that love God. Is it not a happy thought, friends, that we are not only to have God with us, the love of a Savior, but that we are to have earthly friends with us, even at our last moments? Human sympathy and companionship, how much is it worth! Have you ever felt the need of it, dear friends? Have you ever seen the time when you could feel thoroughly what it is to have somebody come and stand beside you and say,—

> Whither thou goest, I will go; and where thou lodgest, I will lodge: thy people shall be my people, and thy God my God?

A lawyer once said to me, that the best man in the community might have circumstances so much against him as to cause his arrest, and that he might even be put in prison when perfectly innocent. I can hardly think this possible in the present state of society. We all know people, at least I hope we do, whom it would be almost impossible to arrest, no matter what the circumstances might be, for the simple reason that public opinion would stand between them and any charge that could be made. Are you one of these people? If not, could you not be one?

One of our young bee-keepers has something that comes in here so well with what I have been saying that I wish to give it here:—

> Success is no chance product, no fortuitous golden shower, but the natural issue of well-directed exertion. The admission of this principle is necessary to vindicate the character of successful men. Reason and Scripture alike, teach that a connection has been established by our Creator between the exercise of our faculties and the attainment of the various objects of human desires, and that industry, prudence, knowledge, and perseverance, have a certain definite value in the business of the world. What right has any one to say, "There is no use in my trying to be a successful bee-keeper, for I never get any profit, and it is all expense"? Now, are you sure that you have done your part? You may lack the all-important part, and that is perseverance, though this connection between the use of means and the attainment of success is not, when properly viewed, inconsistent with the doctrine of Holy Writ, which teaches us that God sometimes, for wise and special purposes, disappoints our best efforts. All the events of time are made subservient to the ends of a moral government. The race is not always to the swift, nor the battle to the strong. In order to try our faith, wean us from an undue attachment to temporal things, and purify our hearts for hallowed

communion with himself, God sometimes sees fit to blight our fairest prospects, and disappoint our most fondly cherished hopes; but he never takes such measures except to promote our real welfare, and they still leave in full force the rule which also is found upon the inspired pages, "The hand of the diligent maketh rich; but the drunkard and the glutton shall come to poverty." So I find we can realize success by trying to imitate men who are successful. To a reflecting mind, this will be no slight benefit. There is, unquestionably, an art in "getting on;" there are certain qualities, mental and moral, which render success with the divine blessings much more likely than otherwise: hence whoever wishes to succeed must first become a learner. Nothing is so dangerous to him as self-confidence. Docility, a willingness to learn his defeats, and be taught by the experience of others, are more valuable to the young bee-keeper than any thing that he can possibly take in. Never try to imitate the indolent, but always strive to be in the front rank with successful men; and if you can not be successful over a few things, how could you control many things? "So run that ye may obtain."

J. H. BURRAGE.

Concord, Cabarrus Co., N. C., April, 1883.

There is one especial word in friend B.'s remarks that I would call attention to; and especially would I emphasize the word "docility." What God wants is docile Christians; not those full of self-confidence and self-will, but those willing to be taught, and always ready to learn. Docility is not laziness, by any means, but quite the contrary; and when it is coupled with energy, and faith in God, success must follow.

Tobacco Column.

A GOOD WORD FOR CAMP-MEETINGS.

I SEE that you are giving a smoker to those who dissolve partnership with tobacco, so I thought if I was not too late you would send one to my father. He quit smoking one year ago last summer at a camp-meeting, and ha not used it since.

FRED REMENDER.

Kilmanagh, Huron Co., Mich., March 19, 1883.

May God bless the camp-meetings, friend R., if that is the fruit of their work. When this kind of meetings cause people to give up their sins in a way plainly to be seen by the world, like the discontinuance of these bad habits, it is a very good evidence of their being the work of God. "By their fruits ye shall know them."

Send me a sun-glass to light my pipe. You see that I smoke; and as it is one of the few pleasures I have, I don't think I ought to stop while I do not use it to excess.

J. W. CORBETT.

Bennettsville, Marlborough Co., S. C., Mar. 16, 1883.

Well, it seems to me, friend C., that this is a little cool all around. Do you suppose that I sell sun-glasses, with the idea that they might be handy to light pipes with? I intended them as a sort of philosophical toy for the juveniles. But if they are going to be used for the purpose you mention, I don't know but I shall have to take a second look at the matter. According to your reasoning, we may expect you to stop when you get to using tobacco to excess. Now, candidly, do you think that is the way they generally do? Is not your reasoning a little "thin," to use a common expression? If I were you, I think I would stop *before* I got where you speak of getting. We are good friends all the same, are we not, friend C.?

I have tried *so* frequently to quit off the "nasty" weed, and made a signal failure each time, that I have felt discouraged, and at times accused myself of extreme weakness and folly in not being *able* to *master* the habit; and now, friend Root, here's the Hon. Judge Jere. Black's *experience*, annexed, and—well, sir—it justs boosts my opinion of my own weakness away up yonder into the nineties. Hear Judge Black (nearly everybody has heard of Judge Black):

WHY JUDGE BLACK USES THE WEED.

Not long ago Judge Black met a gentleman who pathetically related his endeavors to break himself of tobacco chewing, as it met with the unqualified condemnation of all civilized people. "You'll find it a hard case—a hard case, my friend," replied the Judge, with a solemn wink. "I tried to break myself of it once—didn't I ever tell you? Well, it was when I was Attorney-General, and I said to myself, 'Jeremiah Black, we've got to stop this thing.' So I made up my mind, and one morning I started down to my office without a scrap of tobacco. I began the day badly, and it got worse by degrees. I never felt so much like a savage in my life. I dismissed two clerks, bounced a messenger, made a fool of myself three or four times, snapped at everybody, and started home, feeling myself to be a total failure and all creation a mistake. On my way home I met a man whom I respected very much. I told him my experience with leaving off tobacco, and asked his advice. 'Judge,' he said, 'my experience is the same as yours. I tried to leave off too. I quarreled with several members of the church I belonged to, thought the minister was a fool, got tired of my wife, and if I had kept it up, I should have been a moral monster—and I determined to circumvent the old enemy by taking up my cherished vice,' and so," continued the Judge, cheerfully, "I saw that tobacco was conducive to virtue, and [cutting a quid] I propose to keep it up until I leave it off."

Please give us your opinion *now*. Does *this* "settle it"?

R. C. TAYLOR.

Wilmington, N. C., April 13, 1883.

Friend T., I am very much obliged to you for your funny story; but the moral seems to be on the wrong side. But there may be a moral for the juveniles in it, after all. If it is such a very hard thing to break off from the use of tobacco, perhaps they will wisely conclude never to commence. But about yourself and Judge Black: Do you really feel good about giving way to a thing that you think you ought not to? I presume you remember Dr. Franklin's story about the speckled ax. I am very sorry to hear the Judge's neighbor had so much trouble. Quarreling with the members in the church was not so very bad a matter; for if they were good followers of the Master, they would forgive him. Nor would it do so very much harm if he did get to thinking the minister was a fool; for ministers are used to such things (begging their pardon), and it doesn't hurt them. But getting tired of his wife is something a little more serious. However, if it lasted only for a day or two, I suppose even that could be gotten over, especially as she, good soul, would know all about his infirmity. Come to sum it all up, friend T., I believe I should advise you to push ahead, after all; especially as it would take you, but a few weeks to get through the "Slough of Despond," and come out on the brighter and happier shore. May God help you, and all of the friends who feel themselves in any such bondage. "Of whom a man is overcome, of the same is he brought in bondage."

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, MAY 1, 1883.

But unto you that fear my name shall the Sun of righteousness arise with healing in his wings.—MAL. 4: 2.

WE are out of the sea-shells we had on the 5 and 10 ct. counter, and don't know where to find any more. Can anybody who reads GLEANINGS furnish them for us? You will see by our price list the dimensions and prices of those we had.

THE old Quinby smokers we advertised in the last JUVENILE are all gone; but we have quite a number of discarded smokers of various makes that we can sell you for 25 cts. each, but the postage on them will be 25 cts. more. Perhaps these latter, if you want them, had better be sent with other goods by freight or express.

SOME of the friends are already sending queens without any card with them to tell what they are, or whom they are from. Whenever you send a queen, send a postal card in the same mail, or one mail before it. Unless you do this, I shall have to refuse to be responsible for them. You see, we want to dispose of them within one hour after they are received, if possible.

MISREPRESENTATIONS IN PRICE LIST.

IN spite of the best we can do, our price list is sometimes misleading. One reason of this is, perhaps, because we are so cramped for room, and the description must necessarily be brief. Dear friends, we do not wish this to be so, and should be very sorry to mislead anybody, even though we are anxious to sell our goods; and we shall be thankful to have any of you tell us wherein our price list may mislead, and we promise you it shall be corrected promptly, so far as lies in our power.

STARTERS OF FRESH COMB.

ALTHOUGH some trouble to do so, I think it will pay those who have time, to prepare their starters of new comb exclusively; and I should not be surprised if they would find it as Mr. House says on p. 247, especially if the result proved that they could see a whole colony that had been hived in the morning at work in all the sections in the afternoon. In fact, I am not at all surprised at his yield after knowing he paid so much attention to just these two ideas. Now let us see who will profit by these seasonable hints.

WILL you pardon me, my friends, if I ask you once more to call goods by the same names they are called in the price list? Some of you are very bad in this matter. A friend, a few days ago, made an order for "frame straps." Now, what do you suppose he meant? After a good deal of "ciphering" all around, we made out that the man wanted *separators!* Cases almost similar are coming up almost constantly; and when our poor clerks don't happen to hit it, our friends sometimes write back "awfully." Lest the latter might give you a wrong impression, I want to say that, as a rule, our customers have been very kind and considerate. It is only a *few* who get angry, and say that my business practices do not agree with the teachings in the Home Papers.

EVERY little while somebody asks for carpet-tacks from our counter. Well, while Mrs. Root was putting down her new carpets I made her tell what kind of tacks were best. She says she wants them blue, and not tinned. She also wants the heads round, so they won't pull off when they are to be drawn out of the hard boards. And she wants them good and stout so they will hold. We have had some manufactured to order on purpose, and can furnish them for 5 cts. per oz., or 50 cts. per pound. There are about 50 tacks in an oz. If wanted by mail, add 2 cts. per oz., or 18 cts. per pound.

UNTIL further notice we will still pay 35 cts. cash for good wax, or 37 cts. in trade. Please remember, friends, what I have said about sending wax by express. Last evening we got a small box of 5½ lbs. by express, on which the charges were $1.05; so you see our friend had to lose over half of his wax in payment of the express charges. Another friend sent us some wax by mail to pay his subscription to GLEANINGS. The wax amounted to over a dollar, but the postage on it was 54 cts. Had he sent us the 54 cts. in stamps, he would have had his GLEANINGS for over six months, and his wax too.

PUT ON YOUR COUNTY.

MY friends, do you know that every letter that leaves our office (unless it be directed to some large city) has the name of your county written in the address? I have been thinking that if you did know it, and that every time you neglect to give us your county, the clerk who *should* be busily answering your question has to stop all other work to hunt up your place of residence, that you would at least be a *little* more thoughtful. For although it seems a trifling matter, it assumes quite large proportions in answering 150 or 200 letters a day, and costs us not only lots of patience, but, in the course of a year, a considerable sum of money.

IN another column our good friend Mrs. Axtell seems to be borrowing trouble for fear I have given her name a little too much prominence. Why, bless your heart, Mrs. A., we all know how it is, and I don't believe any reader of GLEANINGS ever for a moment thought you meant to take more than your share of the work which you and your good husband have done. God has given you an especial talent for telling your brothers and sisters how you do things, and we think you have improved that talent well. You could never have managed the bees without your husband, and I believe it is equally true he could never have made the success you two have, did he have it all to do alone; and he certainly would not have had time to tell it to us all in the pleasant way you have done. "And they twain shall be one flesh."—MATT. 19 : 5.

CHANGES IN PRICES.

THIS season has perhaps been the worst for advance in prices (alsike clover and fdn., for instance) of any previous one; and while most of the friends have taken into consideration the state of affairs, and have paid the advance without complaining, a few have been very much displeased, and one or two quite bitter and abusive. Bear in mind, friends, that I am in no way responsible for the sudden rise in the value of such things; neither is it in my power to avoid it. I should be very glad indeed to give you the same goods at the same prices, year after year, without any change, but it is not possible. Bear in mind that we say in our price list, in two places, that *all* goods are *subject* to changes in prices *without notice.*

OUR engraver failed to get a good picture of friend Muth, and so he will try again for next month.

OUR basswood is now in nice order for sections; but I tell you, the demand for them is keeping our machines "a buzzing," sure.

DID you ever! We have received 530 new subscribers during the month of April, and GLEANINGS now stands 5508, which is higher than it ever stood before.

UNTIL further notice, the price we pay for dollar queens will be 90 cts. each, and we shall sell them for $1.50. We have now a nice stock on hand, ready to be shipped by return mail.

DZIERZON'S RATIONAL BEE-KEEPING.

MR. NEWMAN has kindly sent us a work entitled "Rational Bee-keeping," by our old father Dzierzon, the originator of the theory bearing his name. The author is not only a thoroughly scientific bee-keeper, but a naturalist. He has probably made greater strides in scientific apiculture than any one man. His book contains his many discoveries, together with his valuable experience and research. In addition to this are foot-notes by C. N. Abbott, the former editor of the British *Bee Journal.* We thus have the opportunity of direct comparison and verification. As regards the nature, the distinctive characteristics and explanation of some of the peculiar phenomena noticed in bees, the book seems to stand among the foremost, if not in the front ranks. I hardly think the implements of the apiary would be at all suited to American bee-keepers; but as for real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. It contains 350 pages, fully illustrated. We can mail it to any address for two dollars.

STEEL GOODS; RUST AND FROST.

BE carefull how you rub your fingers on bright finished steel goods, especially if they are to be put away unused after being so handled. Machinery is usually oiled when ready to ship, but not always. Another thing: Be careful about unpacking steel goods or cutlery in a warm room, after they have been shipped during cold frosty weather. You see, the air we breathe is something like a sponge, and will suck up and hold lots of water. Now bear in mind, that the warmer the air is, the more water it will hold. All right; now, then, if we have a room full of warm air, fully charged with water, it will have to let go of some of this water, if we cool it suddenly. Now you see why iron or steel gets wet, and rusts, if we bring it into a warm room, when it is icy cold. We say it "sweats," when it is nothing but just what I have told you.

Moral.—Do not unpack fine steel goods that are icy cold, in a warm room. Unpack them in a cold room, and let them warm up gradually. Great injury has been done to valuable cutlery by not keeping this in mind.

MAT FOR COVERING THE FRAMES.

NO bee should ever be allowed to get up under the cover of a Simplicity hive. The wood mat, enameled sheet, or the burlap sheet, whichever be used, should always fit bee-tight. Now, a beginner would be quite likely to think this a very troublesome process, and, in truth, it is a little troublesome to fit a mat or sheet down the first time it is used. But be not discouraged, friends. Take a little time to press it down nicely all around the edges and corners the first time you put it over the bees, and you will find that the next time you come to open the hive it will stay in its place nicely without any trouble. Furthermore, the bees will very soon wax it all around the edges, so that in opening the hive you need only to pull it loose from the attachments, except one side, and this side answers as a sort of hinge to make it come in place; and when replaced it should always be put back in the same position. Now, then, when I come to see you, don't let me ever find a hive where the cover is waxed down, and comes off with a snap, because you have at some time or other allowed the bees to get up under the cover.

TO OUR PATRONS.

THE flood of orders at present seems to be almost beyond our ability to fill. Now the question comes up, if somebody has got to be delayed, or go without his goods, who among you shall it be? As we can almost fill three or four orders for regular goods while we are fussing with one order for odd-sized hives or sections, it would seem to be our duty to decline any orders for the present, other than for the regular goods described in our catalogue. Secondly, as we regard it almost a sacred duty to wait on those who have sent the *money* with their orders, is it any more than justice that orders accompanied by cash should have preference? You know, friends, that where a man sends money he has a right to complain in a way that one who has not sent us money can not consistently do. In saying this I take into account that we have many old and tried friends who always send us the money when we express a wish for it, and whose word *is* money; but even then, where the cash has been some little time in our hands, does it not make a difference?

Now in regard to discounts. As a rule we make no discounts to anybody, aside from those given in our price list. If anybody wants to get goods at the 10 rate, he must order 10. The only exception we have made to this is where somebody takes the pains to get an order from his neighbor. In such cases we have generally allowed a discount of 5%; but on some goods we handle, our prices are so very close we find it almost impossible to do this without loss. We will do the very best we can, dear friends; but if that should not be satisfactory, we will promise to return your money promptly the very moment you ask for it. As I told you a short time ago, mail orders, and orders for goods by express, go (with but few exceptions) the day the order is received, or the next day at the furthest. It is orders by freight, calling for a great variety of goods, that we have to delay; and many times we could send these off promptly, if you will add, in closing your order, "Send us what you can of these at once, and the rest when I order again." Where you are sending us orders every few weeks, this plan may answer very well; but where you want your goods to come all in one lump to save freight charges, it becomes a little more difficult.

CONVENTION NOTICES.

The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, May 8, 1883, at 10 o'clock A.M., in the rooms of the Y. M. C. A. M. C. BEAN, Sec.
McGrawville, N. Y., March 20, 1883.

The Tuscarawas Valley Bee-Keepers' Association hold their next regular meeting at City Hall, Coshocton, O., on Wednesday, May 2, 1883, at 10 o'clock A. M. Come everybody.
Clarks, O. J. A. BUCKLEW, Sec.

KEYSTONE BEE-KEEPERS' ASSOCIATION.

The spring meeting of this association will be in the rooms of the Y. M. C. A. at Scranton, Pa., on the second Tuesday of May (8th), 10 o'clock A.M.
GEO. C. GREEN, Sec.

The Mahoning Valley Bee-keepers will hold their thirteenth meeting in the Town Hall at Berlin Center, on the 5th of May, 1883. All bee-keepers, and the public in general, are invited to be present. Do not forget to bring your women, children, and well-filled lunch-baskets. We expect a grand meeting. Meeting to begin at 9 o'clock A M.
H. A. SIMON, Sec. *pro tem.*

CIRCULARS, ETC., RECEIVED.

From H. F. Shadbolt, Winooski, Wis., we have received a 12-page price list of apiarian supplies; 6½ x 3.

Rev. E Burch, La Veta, Col., sends us a postal-card circular of bees, queens, etc.

W. G. Russell, Millbrook, Ont., Can., sends out a 12-page list of bee-keepers' supplies; 8 x 6½.

From E. S. Hildemann, Ashippun, Wis., we have received a large 1-page list of apiarian fixtures.

J H. Tilley & Bros., Castle Hill, Me., have sent us an 18-page price list of apiarian supplies; 4 x 7.

Rev. Jas. S. Woodburn, Livermore, Pa., has sent us his 1883 price list of bees, queens, fdn., etc.; 1 page, 8 x 5.

G. B. Jones, Brantford, Ont., Can., has published a very readable 12-page list of apiarian appliances; 7½ x 5.

Apiculture is progressing in Colorado, as is shown by a neat postal circular from J. L. Peabody, Denver.

C. R. Mitchell, Hawkinsville, Ga., has sent us a postal-card circular of bees and silkworms.

B. P. Barber, Colebrook, O., issues a neat 4-page list of bee-keepers' supplies; 6 x 3.

J. B. Bray, Lynnville, Tenn., announces apiarian supplies for sale in a 4-page circular, 8 x 6.

S. Valentine & Son, Hagerstown, Md., send out a handsome 12-page list of Italian and albino queens, colonies, nuclei, etc.; map fold, 5½ x 3.

Geo. H. Knickerbocker, Pine Plains, N. Y., issues a neat price list of Holy-Land bees, queens, etc.; 8 pp., 7 x 5.

We have just printed for George K. Hubbard, La Grange, Ind., a 20-page circular relative to his hive, bees, etc. We wish all who send in copy, either for job work or as an article to publish, could see the astonishingly correct and plain manner in which friend Hubbard prepared his manuscript. It was equal to print. Directions to the printer were interlined in green ink, rendering mistakes almost impossible.

MRS. LIZZIE COTTON'S CIRCULAR.

I am being asked my opinion of the new circulars Mrs. Cotton is again sending out quite plentifully. The statements she makes, and the prices she charges for the goods she sends out, would, in my opinion, forbid her being classed with our regular supply dealers, to say nothing of the strings of complaints against her that have filled our bee journals for years past.

BEES ARE SWARMING!

"*No*, not just yet awhile." But we offer 230 good 1½ story *empty L. hives* (½ unused), size 12x18x10⅛ inside; frame 9x17¼ outside. 5000 basswood 5x6 one-piece sections in flat, 1000 *broad frames* for ½ story, in flat. Nine colonies choice *bees* in above hives, all at a *bargain*. Address C. HULL, Milton Junction, Wis.

DIPPER GOURDS.--From pint to gallon sizes; straight handles, from 1 foot to 2 ft. in length. Useful for dippers and *bird-houses*. True seed, 6 cts. per pkg., and poultry circular gratis. 5d Address S. P. YODER, VISTULA, IND.

D. SHANGLE, OF JUDD'S CORNERS, MICH.,
Has removed to Chesaning, Sag. Co., Mich.
Former patrons please notice. 5d

PURE ITALIAN QUEENS.

Carefully bred from imported and selected home-bred mothers of best strains. Safe arrival guaranteed by mail.
1 untested queen, before July 1, $1.10; after, 90 cts.
6 " " " " " 6.00; " $5.00
Tested queens, Nuclei, etc., etc.
Send for circular. D. G. EDMISTON,
5d Adrian, Lenawee Co., Mich.

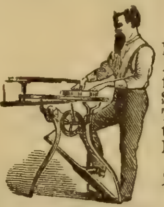
FOR SALE CHEAP.

A large lot of back volumes of *American Bee Journal* and *Gleanings in Bee Culture*. Address
5d J. L. WOLFENDEN, Adams, Wal. Co., Wis.

W. Z. HUTCHINSON

Rogersville, Genesee Co., Mich.,

Is now receiving Italian queens from the South (for particulars see advertisement in April GLEANINGS), and can send them by return mail at the following prices: Before June 1st, untested queens will be $1.50 each; during June, single queen, $1.25, or six for $6 00; after July 1st, single queen, $1.00; six queens, $5.50; twelve, $10 00. Tested queens (reared last season in the home apiary), before June 1st, $3 00 each; during June, $2.50 each; after July 1st, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 5tfd



BARNES'

Patent Foot and Steam Power Machinery. Complete outfits for Actual work-shop business. Lathes for Wood or Metal. Circular Saws, Scroll Saws, Formers, Mortisers, Tenoners, etc., etc. Machines on trial if desired. Descriptive Catalogue and Price List Free.
W. F. & JOHN BARNES,
Rockford, Win. Co., Illinois.
No. 2009 Main St. 11tfd

FOR SALE.

P. ROCK and PEKIN DUCK EGGS; also Orange Cane Seed, 30 cts. per lb., or 4 lbs. $1.00 post-paid, or 10 cts. by freight unpaid. Send card for free circular. N. J. ISRAEL,
5d Beallsville, Monroe Co., Ohio.

WANTED!

I wish to secure the services of a good teacher for my three boys. Besides being a good school-teacher, the applicant must be a practical apiarist. Address, stating salary required, etc.,
5d W. S. GRAY, San Marcos, Hays Co., Texas.

---

100 COLONIES OF ITALIAN BEES in L. hives, in prime condition, for sale. For particulars, ask for my new Price List of Foundation and of New Seed Potatoes.
Address ERNST S. HILDEMANN.
5 Ashippun, Dodge Co., Wis.

Foundation Fasteners for Sections.

Complete, with stand and attachment for punching holes for nails in end of sections, $2.00; without stand or attachment, $1.00. J. D. GOODRICH,
5d East Hardwick, Vt.

Holy-Land Queens.

As I lost all my Italian Bees last winter, I will breed only Holy-Land Queens for sale this season. No tested queens for sale this month, as I now have all the orders for tested queens that I shall be able to spare before I can rear young ones and test them. Dollar queens before July 1, single queens, $1.25; six or more, $1 10 each. After July 1, single queen, $1.00; six, $5 50; twelve, $10.00. Given comb foundation for the L. frame, heavy, in 5, 10, and 15 lb. boxes, 50 cts. per lb.; thin, 65 cts. per lb.
5d I. R. GOOD, NAPPANEE, ELKHART CO., IND.

THE NEW IMPROVED
STEAM POWER

Comb Foundation Factory.

CHAS. OLM, Proprietor,
FOND DU LAC, WISCONSIN.
THE BEST WORK AND LOWEST PRICE.
PURE YELLOW BEESWAX IS WARRANTED. SEND FOR SAMPLES AND PRICE LIST. 3tfd

---

COMB FOUNDATION.

Italian Bees by the pound, nucleus, or colony. Queens furnished when desired. Five per cent discount on A. I. Root's prices. For particulars, address
4-6 E. Y. PERKINS, Jefferson, Greene Co., Iowa.

L. E. MERCER,

—OF—

LENOX, IOWA,

Breeds Pure Italian Bees and Queens for sale; Manufactures the Root Chaff Hive, the Standard Langstroth Hive, and the Mercer Chaff Hive. Sections, dovetailed or all-in-one-piece. I furnish every thing needed to run a first-class apiary. Satisfaction guaranteed, or money refunded. Circular and price list free. 4-5d

---

SEND postal for my 20-page price list of Italian, Cyprian, and Holy-Land Bees, Nuclei, Queens, and Apiarian Supplies.
4tfd H. H. BROWN, Light Street, Col. Co., Pa.

FOR FULL COLONIES OF

ITALIAN BEES AND QUEENS,

4-6d TWO AND THREE-FRAME NUCLEI,
Address P. F. RHODS, NEW CASTLE, HENRY CO., INDIANA.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1000; L. hives, 50c each. Circular free.
2-6d B. WALKER & Co., Capac, St. Clair Co., Mich.

BEE KEEPERS' GUIDE
28 Pages, 50c. per year.
SPECIMEN COPY FREE.
5-7d **A. G. HILL, Kendallville, Ind.**

CARY'S ANNUAL CATALOGUE OF

BEES AND SUPPLIES FOR 1883

IS NOW READY.

You should read it before making your purchases for the season. We offer you goods of very best quality, at very low prices. If you do not believe it, read our prices and send for a sample order.
Address WM. W. CARY & SON.,
2tfd Colerain, Franklin Co., Mass.

CHOICE ITALIAN QUEENS from best strains obtainable. Safe arrival guaranteed. References given when desired. For prices, etc., see March GLEANINGS. C. M. GOODSPEED,
4d Thorn Hill, Onondaga Co., N. Y.

100

Colonies of PURE ITALIAN BEES for sale cheap. Queens all bred from imported mothers. Send for circular. C. C. VAUGHN, Columbia, Tenn. 4-5

FOR SALE!

200 or **300** colonies of Italian Bees in Langstroth hives in good condition. Price, single colony, $6.50; 10 or more, $6.00 per colony. Hybrids, 50 cts. less. I will guarantee safe arrival.
4 5d C. GRIMM, Jefferson, Wis.

HOLY-LAND
AND
CYPRIAN QUEENS
AND
Farm Implements!

I have a fine lot of pure Holy-Land and Cyprian queens which I will sell for one-fourth more than Root sells his Italians. Also a few pure Albinos; they are light-colored, and very gentle.

I keep on hand, and can ship from the factories where made, a stock of Farm Implements, a two-horse corn-planter, with drill attachment; one-horse corn-drills that will plant in hills; a steel-toothed harrow in three sections, with lever to clear from trash, or pass over obstacles; spring-tooth harrows; common harrows, with 40 or 50 teeth; sulkey hay-rakes; sulkey cultivators, plow-sulkeys, etc. Send for Circular. tf

H. B. HARRINGTON, Medina, O.

THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan., 1883. Will guarantee safe arrival of every number.
A. I. ROOT, Medina, Ohio.

CONTRACTS WANTED
WITH
SUPPLY DEALERS,

Dealers, and those who contemplate becoming such, are requested to write for estimates on job lots of hives, sections, etc. We make *specialties* of chaff and Simplicity hives, but will make other styles, if unpatented, and ordered in considerable quantities. Let us know the kind and probable quantity of goods you expect to handle, as well as any other information you may deem necessary, and we will send you prices that we are confident will be satisfactory.
S. C. & J. P. WATTS,
10tfd LUMBER CITY, CLEARFIELD CO., PA.

PATENT FDN. MILLS. 6-inch, $10.00. 10-inch, $15.00.
2tfd WM. C. PELHAM, Maysville, Ky.

JUST OUT!

New Circular, and price list of Bees, Queens, and STENCILS for bee-keepers' use. 4-9d
JOS. M. BROOKS, COLUMBUS, BARTHOLOMEW CO., INDIANA.

BE SURE

To send a postal card for our illustrated catalogue of

APIARIAN SUPPLIES

Before purchasing elsewhere. It contains illustrations and descriptions of every thing new and desirable in an apiary,

AT THE LOWEST PRICE

Italian Queens and Bees.
J. C. SAYLES,
1-6d Hartford, Washington Co., Wis.

BEES AND QUEENS FROM MY APIARIES.

QUEENS AND NUCLEI IN SEASON.
3tfd Circular on application.

J. H. ROBERTSON, PEWAMO, IONIA CO., MICH.

SUCCESS.

Having never lost a colony of bees in wintering, or from any other cause, I think I have a strain of Italian bees that will give satisfaction in every respect. All I ask is a trial order, and, if I can not please you, I will refund your money.

PRICES FOR MAY.

Warranted queens, $1.50; per half dozen,	$ 8.00
per dozen,	14 00
Tested queens of last season's rearing,	2.50
Three-frame nucleus and warranted queen,	4.00
Full colony on 9 frames, in one-story Simplicity hive, and tested queen,	9.00

Combs in the Langstroth frame.

Safe arrival guaranteed. For further particulars, send for circular. Address *J. P. MOORE,*
5d Box 27, Morgan, Pendleton Co., Ky.

HEADQUARTERS IN THE SOUTH

FOR THE SALE AND MANUFACTURE OF

BEE-KEEPERS' SUPPLIES

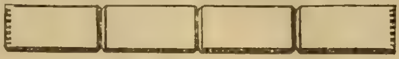
Root's Simplicity, and V. D.-N. hives, frames, sections, foundation, etc.; Italian queens and early 4-frame nuclei a specialty. See advertisement in January, 1883, GLEANINGS; and for further particulars, send for my Illustrated Catalogue.

25 cents cash, or 27 cents trade paid for beeswax.
2tfd **P. L. VIALLON, Bayou Goula, La.**

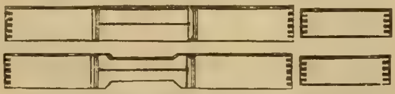
E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

HIVES, SECTIONS, &c.

Langstroth, Simplicity, and other hives.



The Lewis One-Piece Section. V groove.



The Lewis Two-Piece Sections. V groove.

We make the one-piece, two-piece, or four-piece dovetailed or nailed Sections, any size, from half-pound to 6x6x2 inches, or any other SUPPLIES for Bee-Keepers, made of wood.

4¼x4¼ of any of the above kinds of sections,	$4 50
All other sizes, larger to 6x6,	5 00
Half-pound sections,	3 50

Send for Price List and illustrations of our NEW HIVE for comb honey — something new, just out. Price Lists will be sent only to those that write for them. **G. B. LEWIS.**
Watertown, Jeff. Co., Wis., Feb. 1, 1883. 2tfd

1883— —1883

WANTED.

ORDERS FOR EARLY ITALIAN QUEENS!

Three fine imported queens, to breed from, and 80 colonies of Italian bees. All will be devoted to queen-rearing. Single queen, $1.00; 11 for $10.00. Send for catalogue of Bee "fixin's." Beeswax wanted. J. S. TADLOCK,
2-12d Box 42, Luling, Caldwell Co., Texas.

BEE-KEEPERS' GUIDE,
OR,
MANUAL OF THE APIARY.

9000 SOLD IN SIX YEARS.

Tenth 1000 just out. More than fifty pages, and more than fifty costly illustrations added. The work is wholly revised, and contains the very latest in respect to bee-keeping.

I had hoped and expected to make the price $1.00, and it has been so advertised by Mr. James Heddon, and in Mr. Alley's new book. Owing to the added size and increased expense, this is impossible.

PRICE, BY MAIL, $1.25. Liberal discount made to dealers and to clubs.

A. J. COOK, *Author and Publisher,* **Lansing, Mich.**
Michigan Agricultural College, April 14, 1883. 5-6

1000 COLONIES of BEES

In LANGSTROTH and SIMPLICITY HIVES,

FOR SALE ON TERMS TO SUIT PURCHASER.

The above bees are Italians and Hybrids in 8-frame L. and 10-frame Simplicity hives. A fair discount on large orders. Three-frame nuclei a specialty. Satisfaction given, or money refunded. Can deliver any time after May 1, 1883.

Send for special rates to **FLANAGAN & ILLINSKI,**
5-6d Box 819. BELLEVILLE, ST. CLAIR CO., ILLINOIS.

HEADQUARTERS IN THE WEST FOR CYPRIAN AND ITALIAN QUEENS.

Tested Cyprian queens from imported mother (Jones's importation), in April, $5.00; in May, $4.00; in June and after, $3.00. Warranted Cyprian queens, in May, $2.00; in June and after, $1 50. Italian queens from imported mother (Root's importation), after 15th May, $1.00. I have had experience in breeding queens, and guarantee satisfaction. Order now, and pay when you want queens.
4tfd Address **W. McKAY DOUGAN, M. D., Seneca, Newton Co., Mo.**

THE BEE-KEEPERS' HANDY BOOK;

OR,

TWENTY-TWO YEARS' EXPERIENCE IN QUEEN-REARING.

In Paper, $1.00 Per Copy; In Cloth, Handsomely Bound, $1.25.

OPINIONS OF EMINENT APIARISTS OF ITS VALUE.

From Geo. W. House, Fayetteville, N. Y.

The information gained by a careful study of the new method of queen-rearing I consider worth one hundred dollars to me. It supplies a long-felt want to every queen-breeder and dealer, and is invaluable to every bee-keeper.

From James T. Norton, Winsted, Conn.

I have read the book with much satisfaction and profit; it is written concisely, and to the point; should be in the hands of every bee-keeper.

From Rev. D. D. Marsh, Georgetown, Mass.

Your book on queen-rearing has been received. I am very much pleased with it. It is refreshing to see how frankly you have divulged the hard-earned secrets of your long experience. Your book contains a great deal of that information which those who have already taken the "first lessons" in apiculture will find new and valuable.

It will be remembered that Mr. E. T. Flanagan, of Belleville, Ill., went to Kenner, La., in March last to rear early queens. After receiving the book he wrote me thus: "I would have cheerfully given $50.00 to have had your book and apparatus here when I first came. I am raising 300 queens.

From L. C. Root, Mohawk, New York, one of the most prominent apiarists in America.

"Your book has been received. Its title, "Twenty-two Years' Experience in Queen-Rearing," is enough to convince every bee-keeper that they can not afford to be without it. Good queens is the rock upon which bee-keeping rests. I predict a large sale for the work."

From J. M. Hicks, Editor of Bee-Department, American Grange Bulletin. Mr. Hicks is well known to nearly all bee-keepers in the West.

"Book received. I pronounce it the best work of the kind of American publication. I consider it a perfect gem for the practical bee-keeper, and should be in the hands of every apiarist.

From American Bee Journal, April 17, 1883.

We are more than pleased with it, not only with its contents, but also with its typography and binding. It is a handsome octavo of 200 pages, with 20 illustrations. This is one of the subjects upon which more light has been demanded by progressive apiculture, and we are glad to welcome the work of Mr. Alley on the subject, because he is a successful and experienced queen-rearer, and he gives details of the methods he now practices after many experiments, covering a period of 22 years, during which time he has, perhaps, produced and reared more queens than any other breeder. This new work should be in the hands of every practical apiarist, and is worth many times its cost to any one having the management of bees.

Those who desire, may remit on receipt of book. Fractional parts of a dollar can be sent in postage-stamps. Our 22d Annual Circular and Price List of Queens for 1883 contains 32 pages, and is illustrated to show our new way of queen-rearing. Sent free. 5d

HENRY ALLEY, WENHAM, ESSEX CO., MASS.

J. H. WOODWORTH & CO.,

MANUFACTURERS OF

SIMPLICITY BEE-HIVES,

AND DEALERS IN

BEE-KEEPERS' SUPPLIES.

SEND FOR PRICE LIST. 4 6d

WEST WILLIAMSFIELD, - - - ASHTABULA CO., - - - OHIO.

Why not BUY YOUR QUEENS and BEES DIRECT FROM The Breeder?

25 cents saved is 25 cents made. If you wish to purchase Italian Bees or Queens early in the spring, and wish a bargain, you should send for my new Price List. Queens ready in April.

3-5d Address **W. S. CAUTHEN**, PLEASANT HILL, LANCASTER CO., S. C.

HIVES! CHEAP! CHEAP! HIVES!

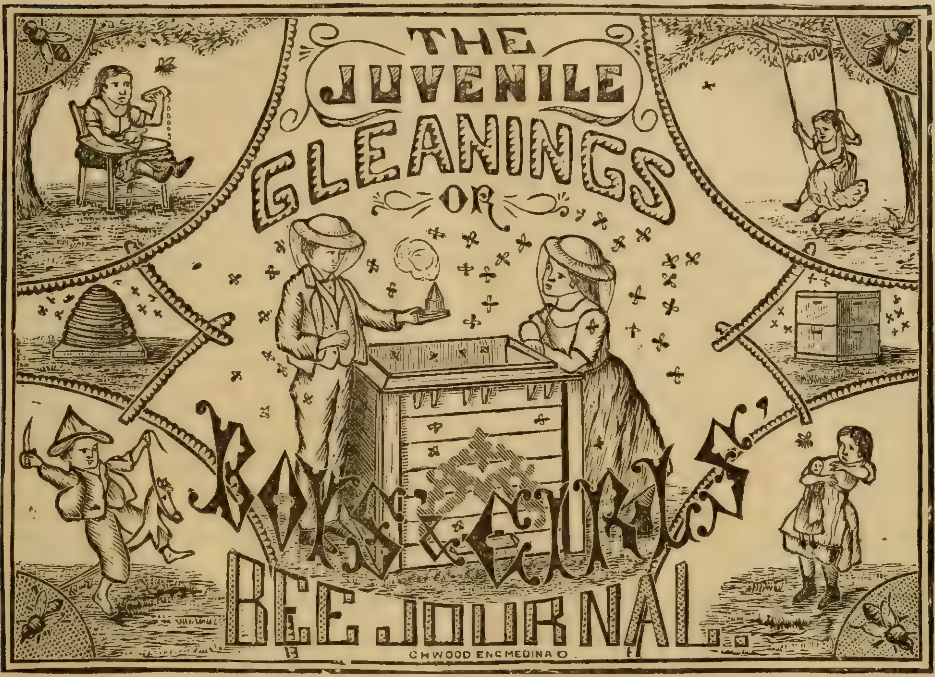
Having put in new machinery, and running exclusively on Hives and Supplies, I can give satisfaction on all orders on shortest notice. Send for price list and circular of Supplies for the apiary.

3tfd **A. D. BENHAM, Olivet, Eaton Co., Mich.**

SOMETHING NEW, NOVEL, RARE, BEAUTIFUL, AND USEFUL.

PARLOR ORNAMENTS MADE OF MICA. Wall-pockets, vases, baskets, brackets, horse-shoes, crosses, picture-frames, letter, glove, and handkerchief boxes; comb, card, and watch cases, etc., etc. For sale at *low prices*. Send stamp for price list to the *only* manufacturer, Miss Lulu Rogers, Cullohwee, Jackson Co., N. C. Will also furnish a cheap grade of *mica* for honey-boxes or observatory-hives. 4-6d

GLEANINGS IN BEE CULTURE EXTRA.



He that is faithful in that which is least, is faithful also in much.—LUKE 16:10.

PUBLISHED BY A. I. ROOT, MEDINA, OHIO.

Vol. II. MAY, 1883. No. 2.

MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10:29.

I WONDER how many of the children to whom I am talking to-day are school-children. Most of you, I presume, are; at least, I hope so. Well, I used to go to school too; and the school I attended, about thirty years ago, was taught by a schoolmaster who had a good deal of trouble in making his pupils mind. For instance, when they were disobedient he would sometimes ask them to come out and stand on the floor; but pretty soon they got so they were disobedient, even in this. Then he would come up to their desks where they sat, and make them come out on the floor, sometimes taking them by the collar. Well, some of the boys finally got so disobedient that they would hold on to their desks so he could not lead them out on the floor, and, I am sorry to say, that in some cases he had to give up and let them sit where they were, because he could not make them mind nor obey him. I wonder if they ever have any such work at your school, dear children. I trust not, now in this enlightened age of the world. Well, of course the directors began to think, after a while, that this would not do, so they hired another teacher. He was a fine-looking young fellow, rather tall, and there was also something about his look and manner that made the most of us think that he was not the one to be trifled with in the way we had been doing. Among the pupils was a boy called Thomas. Thomas was by no means a bad boy, but he had been led into these kinds of tricks; and by some means or other it happened he was the first one to undertake to disobey the new master, in a flagrant manner. We had been carrying on a little too much that afternoon, and the new teacher asked Thomas to come out on the floor. At this, many of the boys began to watch intently to see whether the new master would do any better than the old one did. Thomas didn't go. The teacher spoke to him the second time. He didn't go then. At this the master came up near his seat and took hold of his collar; but Thomas got hold of the seat and bench, as had been the way of doing, and when the new teacher pulled pretty hard, and gradually relaxed his hold as though he thought of giving up, Thomas looked around to some of the rest of us and began to smile a little as though he thought he was rather more than a match for the master. I happened to be watching intently the face of this latter personage; and although he seemed calm and unruffled, yet I thought I caught something of a look in his eye that made me think he was not ready to give up just yet, after all. Of course, the eyes of all the school were turned upon them, when all at once, as if by a sleight-of-hand, the teacher raised Thomas bodily clear out of his seat, and over the desk, and he hardly touched any thing until he found himself in the middle of the floor, on his back. Now, Thomas was always remarkable for his extreme care of his dress, and, in fact, every part of his clothing; and to be lying on the dirty floor on his back was to him humiliating in the extreme. He essayed to get up, but the master said, very quietly,—

"No, Thomas, I shall have you stay there until you can promise me to be a good boy, and obey orders when I give them."

Thomas promised, and that was the end of attempting to disobey the master.

One of the next things I remember in regard to the new teacher was his coming along one day when I was fussing with a peculiar chemical apparatus. For the experiment I was making, I wanted a wooden box to hold water; and although I filled the cracks in my box with tar and cotton, and patched it up as boatmen often do leaky boats, it still bothered me in leaking. Said the new teacher, who was looking on,—

"Why, Amos, why don't you make a box that won't leak?"

I looked up at him and replied,—

"Can you make a box that won't leak, without any tar on it?"

He said he thought he could, and pretty soon with some thin boards, and the aid of father's old chest of carpenter's tools, he cut out the boards and nailed up the box, and it was so nice a piece of work that even I had faith that it would hold water. Quite anxiously I inspected every crack and point when we poured water into it, and, sure enough, it *did* hold water; for not a drop ever came out of it. My friends, do you think you can make and nail up a box so well that it will hold water? Perhaps you had better try it.

Well, after the new master had made the pneumatic trough for me, for that is what I called it, he somehow got into the way of assisting me with a good many of my chemical experiments. He helped me make a little steam-engine out of an old kettle; and one evening after school we made a fire-balloon which, although it never went up very much, afforded us quite a good deal of fun. One remark the new master made about that time, was one I have long remembered. He told somebody (when I was out of hearing) that he would like no better fun than to do nothing else but "make things" for "that boy." I used to show him my old book on chemistry, and by and by he used to spend considerable time at our house, and he and I began to be great friends; although I do remember just now that I once complained to mother that James didn't seem to care very much about chemistry, after all. The reason that I made the remark was, that on that special evening he seemed to care more about talking with one of my grown-up sisters than he did listening to what I was trying to show him.

Years passed. The chemistry was somewhat forgotten; but my old disposition of wanting to pry into strange things about me, and learn all about things, had not left me. I was a man grown up, in business; yet as in my boyhood, I had many things I wanted made, and I wanted many things. Although I was unable to make them myself always, people were at hand to make them for me. So I got into the way of employing a good many people. Among other things, I had learned, too, to know and love my Savior, and it had become a habit with both myself and wife to go to him for all the help we needed, of whatever kind. One evening, toward the opening of spring, I told my wife that my business accumulating on my hands was getting to be more than I could possibly stand. I told her that some one who was not only capable of taking charge of the work, but to take charge of the hands, was getting to be almost a necessity. As it was just before we were retiring for the night, I told her we would ask God to direct us in finding just such a one. We knelt and prayed God to guide me in the selection of such a one. As we arose, I told my wife that I could think of only just one man in the world who had the faculty of doing what I wanted done, but I didn't think it would be possible to get him.

"Who is it?" said she.

The one of whom I was thinking was none other than my old schoolmaster, the man who could make a box that would "hold water," and the man, also, who had the faculty of taking a disorderly school and bringing them into subjection without words or argument. In short, it was Mr. Gray of whom I was thinking. The next morning I wrote him a letter, and in due course of time he came to help me; and then the wish he expressed so many years before, came to pass. He has been now for years as "my neighbor," making boxes for me that will "hold water," helping me to bring order and beauty out of rough pine boards, and sometimes, also, perhaps, rough humanity.

I want to tell you just one more little incident about Mr. Gray, when he was a schoolmaster. As well as a day-school teacher, he was also a beautiful penman and writing-teacher, and so of course we soon had a writing-school started in our little town. Well, in the course of the winter another writing-teacher came there and started a writing-school. As is often the case, a little rivalry sprang up between the two teachers, and the new comer used Mr. Gray in a way that was any thing but gentlemanly. Now, while everybody expected to see Mr. Gray retaliate, and pay him back in his own coin, as the saying is, we were all very much surprised to see nothing but great kindness and friendliness shown in return. Even my sister got impatient with the master, because he would not show a "spark of spunk," as she termed it. But James very quietly replied to her, "Eliza, I am sure my course is the best." And so it proved eventually. During this same winter my eldest brother had a strong desire to go to a dancing-school. When parents and sisters had remonstrated, and, as it seemed, all in vain, James settled the question in this wise:—

"Look here, Marsh, you give up the dancing-school, and I will teach you drawing-lessons. Then you can go out and teach drawing and penmanship, and see something of the world."

"Marsh" accepted the offer, and in due time astonished us all by becoming not only a splendid penman, but of very great proficiency in ornamental penmanship and drawing, and did, in truth, go out into the world and teach both branches quite successfully.

Well, our factory where we are now doing business was built by Mr. Gray; and when he built it I protested almost all through because he and the masons would make every thing so massive, and with such strength; but strong as it was, the building is now creaking under its weight of merchandise; the floors are sinking, and the ceiling is cracking; and Mr. Gray says, as he looks it over, "Why, no wonder, Amos, your buildings break down. Whoever thought of loading every available spot with such piles and piles, and tons and tons of papers, books, machinery, goods, and traps of all sizes and shapes? Now, you just see if I don't make this next new building strong enough. I know what you want to do with it now." Isn't it a pleasant thing, children, to find people in the world who can do so many things you can't do? And is it not pleasant, also, to find that the very things that make us different from each other enable us at the same time to be so helpful to one another?

VIRGIL'S TREATISE ON BEES.

Continued.

ALMOST TEMPTED TO WRITE A FIFTH GEORGIC ABOUT GARDENING.

AND were I not about to furl the sail
On the last quarter of my fourfold tale,
Well toward conclusion coming even now,
And turning to the land my hastening prow,
Perchance rich gardens I would pause to sing,
What cunning care doth forth their beauties bring;
And the rose gardens blooming twice a year
That by the city Pesti do appear;
And how the endive thrives in gentle rills,
And how green banks the bee-sought parsley fills.
Tangled among the growing herbs I'd tell
How doth the cucumber his belly swell;
All these I'd sing, nor would I words forbear
How the late daffy' dons his leafy hair;
The bear's-foot, with its gentle bending bough,
And ivy gray I would not disavow,
Nor yet the myrtle, loving well to grow
Along the banks where peaceful waters flow.

THE OLD MAN OF CILICIA.

For I remember, that in former hours
Under Taranto's lofty southern towers
I saw where its dark river dews the plain
Just ripening with its fields of yellow grain
An aged man from far Cilician strand (1)
On a few acres of abandoned land:
It was not fit for vines, too poor to plow,
Its herbage would not feed a sheep or cow,
And yet he made a garden 'mong the thorns
Rare as the wealth and taste of kings adorns, (2)
Planting verbenas and the poppies white,
And the white lilies clad in snowy light.
Though late at night returning, at his will
With unbought feasts his tables he could fill. (3)
He was the first to pluck the rose in spring
And fruit in fall; and when as cruel king
E'en winter reigned and rove the rocks with cold,
And did with ice the flow of streams withhold,
The leafy hyacinth he cut e'en then,
The summer zephyrs loath to come again.

THE OLD MAN'S SUCCESS WITH BEES.

Therefore this same old man was first to be
Rich with young brood of bees, and first was he
With many swarms, (4) and first from shivered combs
To press the honey forth that stirs and foams; (5)
And he had linden-trees, and also pine,
Most fruitful of the pollen-dust benign.

UTILITY OF BEES IN FERTILIZING FLOWERS.

As clothed itself with flowers each fruitful tree
So many fruits in autumn would there be. (6)
He too transplanted far-grown elms in rows
And pear-trees old, and even bearing sloes,
And plane-trees large enough to yield a shade. (7)
For things like these my space too small is made;
I pass, and unto other pens resign
The task of teaching thus in tuneful line.

(1) Paul the apostle was born in Cilicia, and the old man whom Virgil saw making such a success of gardening and bee-keeping was born in Cilicia too. Isn't it nice? The great Roman general Pompey made war on the Cilician people, took a lot of them prisoners, carried them away a thousand miles, and let them loose in the region about Taranto. You can easily find the place on your map. Italy is like a great boot, and the gulf of Taranto is the little gulf between the heel and the ball of the foot. Our nice old man seems to have been one of these captives.

(2) This is as good as "try, try again" for the little folks. Who's going to give up and say he can't do any thing in the world after this? Here is a man who is old, a prisoner, in a strange land, with no friends, no money, no any thing; but just see how he pitches in and succeeds. He "tackles on" to a piece of land that nobody would own because it was so worthless, makes a beautiful garden of it, and goes to keeping bees. God looked down approvingly from heaven, I think; at any rate, he sent the story of the old man's doings two thousand years down the ages, to teach resolution to the children of another continent.

(3) Right, or not? Answer, ye clerks, and all ye hash-mumblers in tucked-up boarding-houses.

(4) When bees have wintered finely, and are well cared for in the spring, they swarm early; but if they have just barely got through with their lives, why, then they swarm late. The old Cilician's bees swarmed early.

(5) Notice once more the author's well-informed accuracy. He knew that honey, if harvested as early as possible, and without waiting for it to ripen, would foam.

(6) Whoa! whoa! Gently, dear Virgil, or the good folks won't be able to believe you; and then may be they will go to the other extreme, and say it is all a humbug about bees making fruit-trees bear. You see, if our apple-trees should have a big apple for every blossom, the whole thing would come down "ker-smash," flat to the ground.

(7) How touching this is! It seems as if the old man was too far advanced in years to hope to realize much from young trees. Nothing daunted, he went for the big ones — and succeeded. How many of the girls and boys that read JUVENILE GLEANINGS are going to meet the difficulties of life with the unconquerable spirit of the brave old man of Cilicia?

Last month I wrote that I didn't have to plant pines. Well, what do you think turned up and happened since? Why, I planted some pines. This is the way it came about. There is a little girl at our house whose name is May. Her mother is dead, and her father she has not seen for years — he is away off in New Mexico, digging for silver. He sends her nuts of the pinyon pine. They have a pine-tree out there that, strange to say, bears delicious nuts. Well, May's enterprising auntie tried planting one of the nuts, and it came up very nicely, and very quickly. Guess it thought Ohio a heap better than its bleak windy mountain home. Next thing May and I went into partnership, and celebrated arbor-day by planting some more of those nuts.

And would I tell the children about the sand-ridges of Lucas County? Would a duck swim? I think I could tell something of the sand-ridges that would be wonderful — if true; but first let us patiently dig through with this Virgil business. A wise old king named Solomon taught us not to make ourselves "too plenty," lest our neighbors (little neighbors this time) should be weary of us, and hate us.

And you, friend Root, did say, "I wonder if I shall ever get out to see you." I believe you have about promised to come to the Tri-State fair and convention this fall. If you do, you will be so near that one of my bees could go and alight on your nose without tiring himself out very badly — and I declare, I mean to go too, "just for once," notwithstanding I hate conventions and fairs so.

Richards, O., May 3, 1883. E. E. HASTY.

Friend Hasty, did you know that I was passionately fond of gardening? Well, I am; and I tell you, I can appreciate every word of that poem you have given us. I have just now been out showing the boys how to hoe the peas, and it seemed to me as if I could be real happy if I were permitted to work in the dirt all the forenoon. Yet the boys, I fear, considered it a sort of back-breaking drudgery. I wonder how many of our children love gardens — nice, clean, orderly gardens. I almost envy that old man with his garden, even if he *was* a stranger in a strange land. Have you got a garden, friend Hasty? because if you have, I shall be a little more reconciled to leaving business here long enough to go to the convention.

MY VISIT, AND WHAT I SAW AND ATE.

HONEY AND MULBERRIES.

I WILL tell you to-day of a visit, and the first time I ever saw bees swarm (it was more like hearing than seeing.) When a little girl, my grandma went to visit a friend of hers in the country, and took me with her. The children were in school when we arrived, so I had to sit and listen to the old folks, and look at the old-fashioned ambrotypes. My entertainment was not very interesting, excepting the picture of a little dead boy — the first of the kind I had ever seen. But my reveries were soon broken by the exclamation, "The bees are swarming!" and then such a clatter and clash with bell, dust-pan, and hammer, soon stilled that swarm, while at least one pair of curious eyes watched the table prepared with white cover and hive to receive this new swarm of bees.

But in the evening (the children coming home), bees, ambrotypes, and conversation were all forgotten as we started to play. Near the house was a large mulberry-tree; and after placing a cloth beneath to catch the berries, we were soon in the branches, eating and pulling and shaking off the fruit. It seemed but a little while till we were called in to tea; and while every thing here was nice, the crowning effect in my estimation was the generous supply of honey placed on my plate by the kind mother.

Young folks sometimes eat things that are not good for them, and for this reason they grow up thin and languid, have aches and pains through all their lives, are a misery to themselves and their friends. A good supply of brown bread and milk, and a little tender beef with your bread and honey, will give you health with which to gain your wealth. You know, "As the twig is bent, the tree's inclined." Hoping you will all grow up straight and good, I am your friend — E. M.

A CAUTION IN REGARD TO THE DANGER OF FIRE.

ALSO SOMETHING ABOUT WHAT A CHILD MAY DO.

READING Mrs. Harrison's talk to the children about fire, brought fresh to my mind the accidents that occurred in our neighborhood. Last spring a little girl 9 years old was playing in the fire that her mother made to burn the trash in the garden. Her clothes caught fire and burned her so badly that she died in a few days. A few months ago, another little girl caught fire from playing with paper in the fire. All of her clothes were burned from off her except the belt around her waist. She died the next morning. About two weeks after that, a little child sat on the stove-hearth; while there its clothes took fire and burned it so that it died in less than a day's time. I, with Mrs. Harrison, warn you to be careful about fire. Do not play in the fire outdoors, where, if your clothes catch fire, a little breeze will soon fan it into a blaze. Neither play with it in the house. Do not sit on the stove-hearth, as it is not a very pleasant seat, and there is danger in sitting on such places. I love the children, and care not about seeing them burned to death through carelessness. Children, you know not how much good you may do by being careful, thoughtful, and earnest in all your work.

A few weeks ago I had the pleasure of listening to an old Englishman preach, who had been converted by the earnest pleadings of a little girl. At the death of his wife and daughter he became a disbeliever. He thought it could not be possible that a true and just God would take those away that he loved so much. He did not read the Bible, go to church, or Sunday-school. He had lived this way for twenty years, when this little girl came to him and said, "Uncle Johnny, we want you to read the Bible, go to church, and Sunday-school." At first he resisted her; but at last he yielded to her child-like voice. It has been two years and eight months since he was brought from darkness into the glorious light of the gospel. He is 74 years old; his nerves seem to be all unstrung, and his steps are very tottering, yet he can stand up over an hour, and warn men to flee from the wrath to come. My little friends, think not because you are small there is nothing for you to do in the heavenly kingdom that Christ has set up on this earth. Think of the many souls that have been blessed through the earnest work of this little girl. Though she could not carry back-logs, she brought chips and shavings, and began to kindle a fire. God touched this with the finger of love, and it soon became a bright and shining light in this dark world.

I must say something about our bees, or friend Root will think that another bee is after something else besides honey. I want to tell him that I like both bees and honey, although I do not work very much with them. When I go about bees they almost always sting me. When they sting it swells very quickly, and lasts about three days. I would not care so much if I were not leader of a Sunday-school. I am expected there every Sunday morning; and when I appear before my school, I desire my face to look natural.

Last summer my husband sent for two nuclei, which increased to nine during the summer. In the fall we bought five more strong colonies of pure Italians. Packed for ourselves 13, and 2 for a neighbor. During the winter, Mr. Lindley noticed that they were dying. He moved them up stairs into dark rooms, but still they kept dying, until there were only three left out of the 15. We think the reason of their dying was because they had too much pollen in their hives, and when very cold they ate that instead of honey, which caused them to have the dysentery. As we are beginners, we did not learn this until too late.

MRS. NETTIE LINDLEY.

Jordan, Jay Co., Ind., April, 1883.

OBSERVING-HIVES.

SOME HINTS IN REGARD TO STARTING AND CARING FOR THEM.

THE observing-hives are fitted to a window of the room in such a way that the bees can pass out and in through an opening under the sash, and yet have no access to the room itself where the observer sits. It is a complete hive, though a small one. The operations are the same that take place in a full hive, and the advantage is that you can see it all taking place. It will not do to winter in, and must be started in spring or summer, and discontinued when bees go into winter quarters. It does not furnish surplus honey, but will raise good queens like any nucleus, and will swarm if too full, or if destitute of stores. Before your eyes, and almost under your very fingers, these remarkable processes go on. When some one produces a suitable microscope for the purpose, some of you children will make important discoveries. I have sometimes, with a magnifying-glass, interviewed the guardians of a royal cell; they look sober and grand, their faces like the faces of elephants. My note-books contain accounts of many strange things that I have seen the bees do when nobody was touching them, and they, perhaps, were not aware that —

"A chiel's amang ye, takin' notes;
An' faith, he'll prent it."

I have seen them do some queer things that the *books* say they never do. By and by we may all become wise enough to leave off saying, "It is never so done," and say, instead, "I have never seen it."

If, therefore, any boy or girl bee-keeper, or would-be bee-keeper, helping about the preparation for the campaign of 1883, can secure a few pieces of board and panes of glass, and when the hives are coming into shape, can build, or cause to be built, an observing-hive; then when the bees start out in spring, some forlorn queen with a cupful of workers may be rescued from impending ruin, taken in, housed, warmed, and fed, and in a few weeks built up into a flourishing and profitable colony. Or when a strong hive has swarmed, a frame may be taken from it with sealed queen-cells, and a few bees and brood, and the developments will be surprising, though we know beforehand pretty nearly what they will be. This is the best way for boys and girls to begin.

Mr. Root has given us a fine picture of an observing-hive, such as I used for several years. There are also other styles that I have found better. No doubt he can supply any demand that may arise for apparatus or instruction in this fascinating department of apiculture.

D. F. SAVAGE.

Medina, Dec. 7, 1882.

THE APIS.

A BOY'S DESCRIPTION OF IT.

THE apis is one of the most instinctive little animals that nature affords. It is found in almost all parts of the world; but in a wild state, chiefly in the temperate and the tropical zones.

In its wild state, the apis lives in caves and hollow trees, like the bear. It is not quite so large as the bear, hence it does not require so large a place to dwell in.

The apis is very easily domesticated when properly managed by those who understand it; but when in the hands of those who know nothing of its wants and its habits, it is one of the most difficult animals to tame. One great item in manipulating the apis is to "handle with care." Those who handle the apis rudely, will, sooner or later, have to suffer for it, sometimes severely.

The apis is not very particular about the size or the condition of the cage it is placed in, provided it is neither too large nor too small, and does not contain too much debris; if the receptacle is deficient in any of these respects, the apis becomes dissatisfied, and sometimes takes "French leave," and at other times pines away and dies.

The size of the apis varies with the climate, season, management, and various temporary causes. Its life is usually short, although it sometimes lives quite a while, and at other times it doesn't live so long — owing a good deal to the inclemency of the weather.

The apis is more attached to its mother than any other of the inferior animals, and does not like to be deprived of her presence for a single day. It does not usually fancy a step-mother; but, when deprived of its own, it accepts one, and in a short time will think as much of her as it did of its own mother.

Although the apis does not possess the power of articulation, it possesses a great variety of voice, almost, if not quite equal, to that of the dog. It has a peculiar note to express its feelings on every occasion, so that those who are acquainted with it can tell what it is about by merely giving heed to its notes.

The apis is very industrious, and works for a livelihood, like the ant and the beaver. It feeds chiefly on the pollen and nectar of plants. If it can not get these it will eat almost any kind of fruit or grain — if it is well pulverized.

In general, the apis is not given to burglary when it can get a *good living* by honest labor; but when it is out of employment it becomes a great thief, and sometimes a bold and daring robber. There is one thing about it, however, which will always prevent it from making very great success as a burglar, and that is, its voice—it can never keep quiet; besides, it always has a different note when engaged in robbery, so that we shall never need the burglar-alarm to protect us from the ravages of the apis.

The apis doesn't lie dormant during winter, like some of the lower specimens of the brute creation, but it usually keeps pretty quiet in cold weather; and as the plants furnish neither pollen nor nectar at that season of the year, it is obliged to store up its food in summer, or else it will starve in winter.

The apis has six legs and four wings, and a very long tongue, which is divided into a great many parts and adapted to moving in all directions, and is to the apis what the trunk of the elephant is to him.

The apis has no tusks like the elephant, nor teeth like the fox; but it has two strong flexible mandibles, which fill the place of both teeth and jaws. These mandibles work sidewise, instead of up and down, as in most animals.

It uses these mandibles to cut through hard substances, and seldom to chew food with, and rarely as a weapon of defense. It has a weapon, something like that at the "business end" of a wasp, which it usually brings into action when "combatting the foe."

The apis does not belong to the mammalia species of animals, but feeds its young from mouth to mouth, like the pigeon and the dove. It can not fly quite as far as the dove, but is a rapid flyer, and goes a great way to procure its food. It does not carry its food in its beak, like the bird, nor in its jaws, like the ant, but swallows it down into the gullet, from which it is capable of withdrawing it at a "moment's notice;" or, if the food be of such a nature as not to be readily swallowed, it will carry it on its legs, as the hawk and the eagle carry their prey in their talons.

The apis has a common name with which most persons are familiar. This name is composed of three letters, two of which are exactly alike; the other is the second letter of the alphabet.

M. A. Jackson.

Bangor, Marshall Co., Iowa, April 21, 1883.

KIND WORDS FROM A "BLASTED HOPER."

FROM 18 TO 8, $150.00 OUT, AND NO BEES, NOR HONEY EITHER.

It is with great grief that I write these few lines to you, to let you know how I am troubled now, for I think I am a good object for Blasted Hopes; for my bees are all dead. After uniting in the fall, 18 to 8, and then losing the 8, I think it about time to quit trying to keep bees. I commenced keeping bees in 1876, and from that time till now I have invested over $150.00. This may seem big or fishy, but I have the figures to show for themselves. Now, my object in writing this is to let you know how I feel, and that is, that I do not feel contented without the bees, and to have you discontinue Gleanings—not because it is not worthy of patronage, but from the fact that I intend to move from this place again; and not having any bees, it would be of little use for me to be having you changing my address so much; but I do hate to have my name erased from your subscription list; and when I get settled down again, or happen to get some bees, if ever I do, you shall have my name there again. The causes of my bees dying are (they were all in the cellar, but it was a cold one), starvation, with plenty of honey all around them, and from being confined too long in that place, all dead. But a couple of lines that I have partly made up, and I must close up.

You may break, you may shatter the hive at will,
But the propolis and wax will stick to it still.

I add these, because I mean by it that all I have got left is empty hives, daubed combs, etc. With this I will now close, by saying, good-by, my dear old friend, until we meet again. Much love to you and your family, and, I almost forgot to say, to your employes, especially the girls there. There, I have almost let myself out; but, never mind; if I ever meet any of them, we will make this all up. Well, well; I keep right on writing, so I now shake hands with you in my mind. Chas. W. White.

Madison, Wis., April 17, 1883.

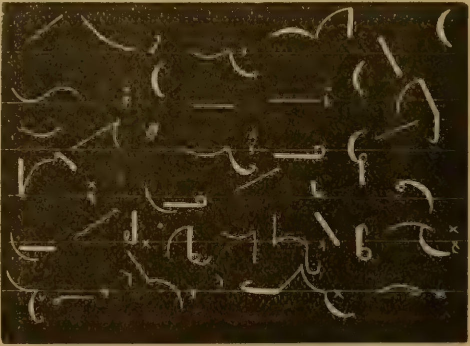
Inasmuch as I have given so many encouraging reports in our juvenile paper, I have thought best to put in one on the opposite side, to let our young people know that sometimes we do have up-hill work as well as the other. Friend W., I am very sorry for your misfortune; but for your encouragement I would say that some of our largest honey-producers have, in their beginning, made much such a report as yours. Stick to the hives and "propolis." Get some more bees going, put your trust in God, and all things will come out right.

SOMETHING ABOUT SHORT-HAND.

BY AN OLD GLEANINGS HAND.

Two months ago the editor of the Juvenile said he would soon have a person at work here in the factory who would write as fast as he usually talks, and thus save him a good deal of valuable time and exhausting work. If any of the children will try to write down what the preacher says, they will see how utterly impossible this is, with common letters; and hence some may have a curiosity to know how it can be done at all, and to see how it looks when it is done. Of course, we can not explain it, except in the most general terms.

We here give you the Lord's Prayer, written in "Phonography," called *short-hand* for short.



Although these marks look rather crooked, they are a hundred times more regular than common letters. The first little slanting mark you see is shorter than the letter *t*, and yet it is the word *our*.

Now just make this mark and then write the word, and you will realize how slow our common writing is. These marks represent sounds, and not letters, and some stand for words. But the oddest thing is, that some words are expressed by not writing them at all. This reminds one of the Irishman who told the conductor to stop, as he had a passenger aboard who was left behind.

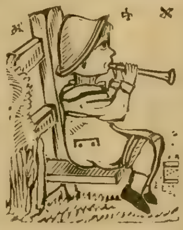
A knowledge of short-hand is getting to be quite common, and those using it get very fair wages. It is used in newspaper and telegraph offices, courts, in churches, and many other places. Even if not used in reporting speeches, it is convenient to write your diary with, and for correspondence with others who use it. Many people waste enough time to learn this art; and if you wish to pursue a pleasant and profitable study, let me advise you to get a book on this subject, and go ahead. W. P. R.

Medina, Apr. 30, 1883.

THE LITTLE BEE-BOY.

THE WAY THEY KNOW WHEN THE BEES ARE SWARMING AT JOHNNY'S HOUSE.

JOHNNY'S father has bought him a new 5-cent tin horn. You see, Johnny is to have 5 cents for every swarm of bees he sees, so he takes his seat on the end of a board that sticks through the fence, with the horn all ready, and when a swarm comes out of any one of his father's 100 colonies of bees, he is ready to give the alarm promptly. Don't you think Johnny will have a good time? The Bible says, that he that is faithful in few things shall be made ruler over many things. Now, if Johnny keeps his eyes right on the bees, and doesn't forget, and run off to play — that is, until his papa comes home again, for you don't expect a small boy like him to watch too many hours without a little rest or play spell — if he does all that faithfully, he will likely some time be entrusted with some greater work. Wouldn't you like to be there when the first swarm comes out, and hear him toot! toot! toot?



THE BEE-EATER—MEROPS APIASTER.

A LETTER FOR THE JUVENILES FROM OUR GOOD FRIEND FRANK BENTON.

FRIEND HASTY, who has given us (you know I want you to count me among the "juveniles") a good letter in the Jan. number of JUVENILE GLEANINGS, did not tell about the "bee-eater" mentioned in the part of the Fourth Georgic published on p. 145, so I'll add a note to his. This bee-eater is probably the green and gold plumaged bird known by the Latin name of *Merops apiaster*, and is common in all Mediterranean countries. The Greeks call it *melissophagos* (which means bee-eater), and the Germans and French have names of similar meaning. The Arabs in Syria call it, however, something like *wor-r-rak*, from the sound of its voice. They come nearly always in flocks—often in large flocks, and circle about the apiary, taking in multitudes of bees on the wing. Their flight is peculiar. They rise high in the air, generally at an angle of about forty-five degrees, uttering all the while their strange cry, usually repeated twice in rapid succession: *wor-r-rak, wor-r-rak;* then suddenly turning in a very sharp angle, the long fan-like tail spread out, they swoop down toward the bee-hives with widely opened beaks, taking in every hapless bee that is found in their way. I have counted sometimes as many as twenty workers in the stomach of one of these birds brought to me, but for all that I do not regard them as the worst enemies we have in these countries. There are many kinds of lizards, wax-moth larvæ, and, worst of all, great hornets that swarm about in thousands, and fiercely besiege the bees at the entrances of their hives—at times, if no action is taken against them, *snapping up nearly every bee that dares to venture out.* But whenever the bee-eater calls out his *wor-r-rak, wor-r-rak*, the natives are ready, gun in hand, especially as they regard his flesh as a tidbit. Great numbers of them are caught alive and sold in the bazaars for extremely low prices. One I bought in Cyprus for about two cents was given a perch in a large room, and stayed there for some weeks, his wing-feathers having been clipped. I used to give him daily a few drone bees, but it seems he preferred workers; so when I found crippled workers in front of the hives I used to gratify him with them. I was enabled to examine him closely, and learn some of his ways. The bee-eater is about the size of a robin, and has bright green plumage on the back, shading off into beautiful purple and blue, and on the breast and under side, lemon yellow. The legs are slim; the beak like that of a snipe—slender, and about two inches long, giving a wide gap when open. The tail is like that of the jay-bird, and they may be likened to this bird in disposition, being rather quarrelsome and surly. I did not succeed in taming my specimen, although we had at the same time a jackdaw as tame as a pet lamb, and that got very jealous of the bee-eater. (Mrs. Benton has promised me she would tell the little folks in JUVENILE all about "Dickey," the jackdaw who helped us in our work.)

The manner employed by the natives in catching the bee-eaters alive is peculiar. I have never seen it practiced except in Cyprus and Syria. Straight whips cut from trees are tied together to form a bundle about the size of a man's arm, and this, after having been daubed with a gelatinous, sticky substance, is put among the branches of a tree, or in open places where the birds come. As the color of the substance is either green or gray, according to the place it is to be used in, the birds are not afraid of it, but come and perch upon it, and stick fast by their feet, whereupon they are captured by the peasants. I am very much vexed with my memory for having played me a trick it does not often do; for it has failed to keep for me the explanation of how these funny bird-catchers are prepared. I remember asking all about them, but the information given me on this point seems to have gone out of my mind. But if anybody wants to know about them, I know just who can tell all about it, and that is Philip Baldensperger, of Jerusalem, who wrote the interesting and accurate letter about "the moth that squeaks," published on page 70 of Feb. GLEANINGS. FRANK BENTON.

Athens, Greece, March 17, 1883.

Many thanks, friend B. By all means, have your good wife tell us "children" about Dickey, the tame jackdaw. Your plan of catching birds is quite ingenious, and no doubt it would work; but where shall we find the adhesive substance, strong enough to hold a bird by his feet? Will friend Baldensperger, when his eye meets this, bear in mind that we are all waiting to have him give us the desired information?

MRS. HARRISON TO THE JUVENILES.

A SHORT LETTER ABOUT HENS AND QUEENS AND POSIES.

WELL, juveniles, how are you by this time? I did not write any thing for you last month, because I thought that you wanted the journal all for yourselves. I see in the last JUVENILE that Bettie G. Faris tells how to make hens lay. Who will tell us how to feed a queen, so she will lay "a heap of eggs"? Do you think red pepper would make her lay, or sneeze? I have a shelf across my bedroom window, to hold flower-pots, and roses and fuchsias are now in bloom upon it. In one of the pots some spider plants came up, and they are now about six inches high; and as soon as it does not freeze at night I will transplant them in the garden. Who among you is going to raise the most seed of honey-plants? MRS. L. HARRISON.

Peoria, Ill., May, 1883.

MARRIED.

At the residence of the bride's father, May 5, 1883, by the Rev. P. F. Graham, Miss Ida M. Chapin to Mr. Ed. E. Wood, both of Medina.

Another victim! alas, there are three!
Yet, still here's a trio who will faithful be
To ledger and desk — oh! time will tell.
So, Ida, we bid thee a tender farewell.
-- LU, CARRIE, and ELLEN M.

When Bess left us a few years ago, it seemed for awhile as if such a one as she would never be found again, to take her place in the clerks' office. By God's providence, however, her friend and schoolmate, Ida, soon took her place, and managed her duties so well that we almost began to think that there was not such another one as Ida. Although she is in our office still, and promises to stay with us during the busy season, when she does come to leave, not only will she be sadly missed here, but I fear our customers, who have long depended on her to straighten out and unravel every misunderstanding, will meet with a loss that perhaps no other one can very soon make up. While I feel sad to think of having these faithful girls go away from me, and take up other duties in life, yet with this sadness comes a cheering thought, because our business has, perhaps more than any other, demonstrated woman's ability and capacity for business. May God bless and be with you all, Stella, Bess, and Ida; and may you often think of us here, though you are with us no longer.

My work in life has been, as you know, to a great extent, testing and trying humanity. I have been constantly looking and watching and praying for helpers with bright, strong, clear intellects, and those who had, together with these intellectual powers, a sense of fairness and right, that, in our business relations, we may do none of you injustice. Well, in our office work it may be no more than right for me to say that I have found woman's capacity in all these points fully equal to any thing I have ever met in our own sex. I feel to thank God for it, because it is only in these latter days that woman's sphere of usefulness has been developed as it is now; and although Ida and Bess may not be here, I confidently expect God to send us another who will do the work for you, my friends, as they have done it.

JUVENILE DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye takin' notes,
An' faith, I'll prent it."

WELL, children, it is the middle of May. The fruit-trees are in blossom, and every thing is lovely. The bees are busy, and so are we here in the factory. In fact, I am so busy that I think I will put in your little letters, and stop right here, and not say another word. We are good friends all the same, aren't we? There, now, go on.

THE ASSISTANT "P. M."

Pa's 8 stands of bees got through the winter all right; he keeps the postoffice, and I am his assistant postmaster. KATIE GOUGH.

Rock Spring, Washington Co., Mo., April 19, 1883.

My uncle has 2 colonies of bees. We took out over 100 lbs. of white honey. They did not swarm last year. They are working well. FRED G. TRAVIS, age 10.

Watkins, Schuyler Co., N. Y., April 20, 1883.

ALBERT'S CANARY.

My pa has no bees, but I have a canary bird which will, when I open the cage, fly out and alight upon my shoulder; and if I move my head it will perch upon my ear; and when I go up to the cage it will kiss me. ALBERT HOWARD, age 12.

Staunton, Ind., April, 1883.

A COMPOSITION ABOUT BIRDS.

There are many kinds of birds — the redbird and the canary, blackbird and the jay-bird, and the catbird. The sweetest birds to sing are the canary and the redbird. The latter has red feathers, and the canary has yellow feathers. C. CARMIKLE, age 11.

Staunton, Ind., May, 1883.

4000 LBS. OF HONEY FROM 40 COLONIES.

Papa had 40 colonies of bees to begin the season with last year. He got 4000 lbs. of honey — 1000 lbs. extracted and 3000 lbs. of comb. Papa packs his bees in dry sawdust, on their summer stands. In January he got 25 colonies of one of our neighbors. He lost 4 out of the 25 colonies; and one weak, queenless colony of those he had last fall. Papa has kept bees for four years, and this is the first winter he has lost any. This is my first letter.

INEZ CHAPMAN, age 10.

Millbury, Wood Co., Ohio, April, 1883.

DECOY HIVES, AGAIN.

I see in the last JUVENILE that you ask who can tell you about swarms of bees going into empty hives. I can tell you a little about it. Two or three years ago we had some hives in the shop, that had frames and comb in them. One day we found a lot of bees flying through the shop, and the next day the swarm came in through the open window and into one of the hives. That evening my pa and uncle took them to the apiary.

FRANK MCCULLOUGH, age 9.

Mercer, Mercer Co., Pa., April 26, 1883.

Very good, Frank. The fact you give is a valuable one.

ANNA'S PAPA, AND HIS LOG-GUM HIVE.

Pa has one stand of bees this spring. He bought two stands last winter. They both died. He bought another this spring. It is working nicely; they are in a round log gum. He thinks they are much better than any other way. ANNA B. BUTT, age 11.

Shermanville, Casey Co., Ky., May 1, 1883.

Now, Anna, I don't think your papa will think keeping bees in log gums is better than any other way, very long; especially if he reads the juvenile bee journal. I am sure we can get him over that. Do you not think so, children?

CLIPPING QUEENS' WINGS, AGAIN.

I want to give your 7-year-old bee-man credit for giving the best plan for clipping queens' wings that I ever heard of. My pa has improved a little on it, I think. He overhauled 9 hives, and clipped all the queens in less than half an hour. The greatest advantage to him is catching with the right hand. He uses a small knife, and with the queen's fore feet between his thumb and fore finger, he slips her wings over the top edge of the hive, and runs the knife right across her wings, which does the work nicely. JULIA A. GRIFFITH, age 12.

Shadwell, Va., April 22, 1883.

Pa has 60 swarms of bees, but I don't help him tend them very much, as they sting me so badly every time I go near them. Pa has got Mr. Novice and Blue Eyes' picture in his album. I should like to see Blue Eyes, and have a visit with her. I think she looks so "cute" sitting on her pa's lap, but I suppose she is too big now to sit there. I think I should like some of the little cards to give away to those who swear. I have an uncle who swears, and his little girl, only four years old, has learned it of him. RACHEL C. KING.

Newtonville, Iowa, April 22, 1883.

You are right, Rachel, in thinking that Blue Eyes has grown to be quite a large girl; but for all that she sits on her pa's lap yet, and I hope she will for a good many years to come.—It certainly is awful to think of a little girl four years old learning to swear. We gladly send you some of the cards, with a prayer with them that they may be the means of awakening thought on the subject.

Willis Phelps works for us, and he said that he knew you quite well. He drives the 'bus for papa. He has 2 swarms of bees in our garden.

A SHORT STORY ABOUT IMPORTED QUEENS.

Willis sent to Italy for some Italian bees and a queen. I can hardly tell the queen from the others.

GERTIE MCKISSICK, age 10.

Canon City, Colo., April 21, 1883.

My little friend Gertie, your story reminds me of the "story" of the man and the calf. It was just this : —

> There was a man who had a calf,
> And that is half.
> He took it out of the stall,
> And tied it to the wall, and that is all.

SIMEON (NOT "SIME") AND THE BEES.

My pa has 10 stands of bees; they are doing very well. Pa had 8 queen-cells. He put two into a nucleus, and one into a large gum. The bees did not like to have us work with them. They tried to sting me and pa. I was smoking them, and I kept them away. Every time pa would raise up the cloth they would take after him. He would tell me to come away. I would go away, and about half a dozen bees would "foller" me out. They would not get to sting me, for I would smoke them away. I never got stung more than once in my life. Mr. Root, don't call me "Sime" any more. That is not my name. My name is Simmeon Benjamin Carr. If you please, send me Ten Nights in a Bar-Room.

SIMMEON B. CARR, age 11.

Maysfield, Texas, April 6, 1883.

Why, *Simmeon*, I only called you "Sime" because I thought you wrote it that way. After all, isn't your name *Simeon* with one *m?* I am very glad you can use the smoker so as not to get stung; but I think I would give those bees so much smoke to start with that they wouldn't be "follering" folks about in that way.

LOOK OUT FOR THE MICE, ETC.

Papa lost 2 stands in March. One of them the field mice destroyed. Papa said he would give me 5 cents for every two I could catch. I caught 4 out of one hive, and 2 out of another. The other 22 hives are doing well. They stayed all winter where they were last summer. Papa bought an albino queen last summer. He was not at home when it came. We fed her and the few bees with her, by dropping honey on the wires over the cage for two days. When papa came he put her in a hive that had no queen. She disappeared, and we have not seen her since. Papa gave me a swarm last year. They died this spring, but I have got some more now.

THE RUNAWAY SWARM.

Last week a swarm came from the woods, and tried to get into one of papa's hives. Our bees killed a heap of them; the others went back to the woods, and settled on a low bunch of ivy. I followed them and brought them back. I am feeding them and will have a good hive of bees yet. Papa thinks they are a swarm that went from here last summer. They are half Italians.

Chalcedony means a precious stone. Revelation 21:19. WESLEY L. WHITE.

Broad Run Station, Va., April 17, 1883.

A BOY'S BEE-KEEPING.

I began to keep bees in 1881, with one colony; in 1882 I increased to 4; Italianized; sold one for $10.00; lost two this winter; have one left. My bees are in Simplicity hives. **ALONZO RUSKS**, age 11.

Milwaukie, Ore., April 14, 1883.

Ma thinks that you will have to put pa in Blasted Hopes, for he has only two hives of bees. We get the JUVENILE. We have eight chickens, and a rooster that can stand on the floor and eat easily from the dining-table. **NORMAN GIRDWOOD**, age 7.

Allegheny City, Pa., April 22, 1883.

Papa has two hives of bees. Last summer he found a swarm in a hollow tree. He sawed off the top and bottom of it. They increased to two swarms. One of the swarms ran away. We got 12 lbs. of honey from one of the hives. **KATIE TURNER.**

Rice, Navarro Co., Texas, March, 1883.

JOE'S LETTER.

We had a swarm of bees last Sunday, with a young queen. Pa has 7 swarms. He just got a new queen to-day. I went out into the country, and helped pa carry a swarm a mile and a half. The sourwood will bloom next month, then we shall have some fine honey. Pa got a book from Mr. Alley. I like to read GLEANINGS. **JOE W. HARBIN**, age 10.

Statesville, N. C., Apr., 1883.

FROM 9 TO 22, AND BUT ONE STING IN 2 YEARS.

My pa is a trapper, but he keeps bees. He had 9 hives in 1882, and increased to 22. I carry the combs to the extractor, and extract the honey, and then carry it back to the hive. I have had but one sting in two years. I can push a boat across the James River. Pa has some beautiful Italian bees.

EVIE L. STEGER, age 14.

Payne's Island, Va., May 2, 1883.

My papa has one swarm of bees, my sister one, and my mother two. They are in box hives, and we want to put them into Simplicity hives. I can harness one horse to the buggy, and two to the double wagon, and I could when I was only 9 years old, and I am 10 now. **ETTIE BLACK.**

Saratoga Springs, N. Y., April, 1883.

Why, Ettie, could you do all that when 9 years old, and you a girl too? I guess you are a wide-awake people at your house.

Mamma says I may write you a letter. She has 20 stands of bees, and no one to help her but me. I think if I have a veil I shall not be afraid of the bees, and I think little boys seven years old can help their mammas lots if they try, don't you? She says that I save her a great many steps. This is the second letter I have ever written, and I hope you can read it. **MALLIE PROPER.**

Portland, Ind., May 2, 1883.

To be sure, I think you can help, Mallie; and I am very glad to know you save your mother many steps.

HOW TO GET RID OF DRONES.

When my uncle wants to get rid of drones he moves the frames into another hive, and takes all the honey from the bees, then the bees will kill the drones. This is only for the honey season.

EMMA M. ISRAEL, age 8.

HOW TO GET THE BEES OFF—A NOVEL WAY.

My brother used to keep my father's bees by the shore of the bay, and when we wanted to take out honey we took out a section box, ran to the water, and threw it in the bay to get the bees off from it. My uncle has come from the east. He said that was a new way of taking honey. On account of having no rain on the coast, we have moved the bees to the mountain. **J. P. ISRAEL, JR.**

San Diego, Cal., April 24, 1883.

MAY'S LETTER.

PAPA HAS GOT 100 HIVES OF BEES. HE HAS LOST 37. SOMETIMES I GET A PIECE OF ICE AND WASH MY BROTHER'S FACE. I HAVE A BIG DOLL. IT HAS A NEW DRESS.

Windham, N. Y., Apr. 20, 1883. MAY COE.

WILLIAM'S LETTER.

Pa has 11 hives of bees; he has one of the finest-looking hives you ever saw. Pa sent for a smoker. I have fun smoking the bees. Pa has got a thousand of those little pound sections.

WILLIAM GUISINGER, age 8.

Stanley, O., May 5, 1883.

I stay with my uncle. He has bees. He got 2 hives last spring, and now he has 7. They are getting along well. I like to watch them gathering honey out of flowers. I got stung in the summer, up above my forehead, and it swelled my eyes shut. The rest of the text is, Let us not be weary in well doing, for in due season we shall reap if we faint not.—GAL. 6:9. **BELLA FRASER**, age 12.

Campbellville, Ont., Can., April 18, 1883.

SUNFLOWER HONEY, ETC.

The bees did not make much honey last year, and what they made was made of sunflowers. Papa sent to you for his bee-hives. Papa has only 7 hives, all in good condition.

POLLEN FROM COTTONWOOD.

The bees are gathering pollen now from cottonwood blooms. I have had my hands right down among the bees, and they never stung me.

MARY HOBSON, age 12.

Toof, Col., April 29, 1883.

MAMIE'S EXPERIMENT, AND HOW IT TURNED OUT.

My pa has kept bees for 7 years. He had 16 stands two years ago, and the cold winter killed them all but one. Now he has 9. I like to watch the bees at work. Last summer I thought I would help them a little, and caught one and carried it from the stand to the flower, and it put its "hot" foot on me, and I left them alone. **MAMIE M. BARRINGTON.**

St. Mary's, O., April 25, 1883.

Mamie, it is said that anybody can lead a horse to water, but that all the world can't make him drink, if he doesn't want to. I guess you found it about so with the bee you carried to the flowers, did you not?

SHORT, BUT PRACTICAL.

I can tell how to make hens lay. Pound up raw bones for them. Ma has tried it.

ALICE CADE, age 9.

We have only one stand of bees. This is the third one pa has bought, but the first two died before summer came. Pa thinks they will live this time. They are gathering pollen now. Ma and pa have got the bee fever since they have commenced taking GLEANINGS. I can water the horses, put on the bridles, and hitch them to the wagon.

BERTHA H. CADE, age 10.

Damascus, Pa., April 25, 1883.

ADVANTAGES OF FARM LIFE.

We have turkeys, chickens, ducks, sheep, bees, horses, cows, and little "bossies." I like to live on a farm, for we have eggs, milk, apples, and honey.

HOW TO MAKE HONEY WHITE.

When papa has comb honey that looks very yellow, he puts it on shelves by the window, and it gets very white. He belongs to the G. A. R. He was a soldier. I have two little sisters and a baby brother. I would like to have a book. I like books and pictures. **FORREST E. RUGER, age 7.**

Conklin Station, N. Y., April 28, 1883.

THE FAMILY OF BEE-KEEPERS.

My papa has four hives; my mamma has three; my brother Joe has one; my brother Churchill has two; I have one. We are all bee-keepers, except baby Blue Eyes. Our bees are Palestine bees. We like them best, because they build up sooner in the spring, and are ready to work earlier than other bees, and are better comb-builders. I have two canary birds. I have been going to school, and we start again in a few weeks. I go to Sunday-school.

MAGGIE WILLIS, age 7.

Nevada, Ky., April 21, 1883.

THE FLOUR-MILLS OF MINNEAPOLIS, MINN.

I live near Minneapolis, which manufactures more flour than any other city in the world. It has 27 flouring-mills, and in one day can make 27,560 barrels of flour. The mills are run by water power, which is furnished by a fall of 82 feet in the Mississippi. The mills furnish employment for 1200 men. I think that that much flour could feed a good many mouths in one day. **RUTH M. HYNES.**

Shingle Creek, Minn., April 27, 1883.

That is certainly a *flour*ishing city, friend Ruth. Florida may be the land of flowers, but Minnesota is the land of of flours. See?

BEES AND POULTRY.

Pa keeps Italian bees, but has had some bad luck with them this winter. He has lost several swarms. I keep hens, and they lay eggs every day. I have all the eggs I get from them. I want to make money enough from them to buy a swarm of bees. I feed them hot peas. I go to school every day. I have not missed a day since New Year's. I should like to get a setting of brown Leghorn hen's eggs. Can you tell me where to get them?

BYRON BUCKLEY, age 11.

Cheapside, Ont., Can., April 23, 1883.

Who will tell Byron where to get the brown Leghorns?

CORA, AND HER TURKEYS AND CHICKENS.

My papa is raising Italian queens. Mother has got some little turkeys and chickens. How many bee-hives have you, and how many chickens?

CORA F. STEGER, age 13.

Payne's Station, Va., May 2, 1883.

How many bee-hives, is it, Cora? Why, I suppose I must have a thousand or two, but I presume we have only about a hundred that have bees in them. We have only three young chickens, but we have got 30 or 40 grown-up ones, and they lay lots of eggs, too. Only to-day noon, the man who takes care of the horses found a nest in the manger; and the funny part of it was, that there was a hole in the bottom of the manger, and the eggs ran down into the straw; and although he had gathered the eggs every day for some time, he found in this hole in the straw over 20 eggs, and all good ones.

FROM 12 TO 46, AND 500 LBS. OF HONEY.

My papa had twelve box hives last spring, and transferred them to nice hives; increased to 46; lost four through the winter; extracted about 500 lbs., besides taking a great deal in the comb. We don't have to use chaff hives here; our bees sit in the yard all winter. Papa has a bee-hat made of wire that he wears when he works with the bees.

A NOVEL BEE-HIVE.

Mamma hived a swarm in a pillow-case. Papa was gone, and she did not have any hive to put them in. She drove four sticks in the ground and stretched the case over them and put the bees in and kept them until next morning. I should love to have a book if you think this will do. I have done the best I could.

JOHNNIE SIMPSON, age 9.

Dodd City, Fannin Co., Texas, April, 1883.

Very good, Johnnie. I think your mother deserves a medal for originality. Why, this hive will be an improvement on friend Hasty's idea some little time ago of having hives with a cloth case to go over them; and further, it did extremely well indeed.

MARY'S STORY.

We commenced with two hives, and now we have ten. We all love honey here, and papa says that he intends to work until he gets a hundred. The pigs got into the garden one day and turned over the hive, and my eldest sister tried to set up the hive, and they stung her so badly that she could not see for several days. One day we went up in the orchard, and on one of the trees was about a foot of comb the bees had made; and when they were put into the hive they did not like it, and went away.

MARY L. WASHINGTON.

Nashville, Davidson Co., Tenn., Jan. 2, 1883.

Why, Mary, you had as much trouble, almost, with the pigs and the bees as did Mr. Merrybanks' neighbor a long time ago when we first got acquainted with them. Did you see the picture? I am glad you told us about the comb the bees made in a tree. I suppose it was among the limbs, was it not? Perhaps the bees did it from a sort of old instinct that prompts them to do it the way they did when they lived in a warmer climate.

A "BEE" STORY.

I did not see the picture of the twins in the JUVENILE. Papa has 35 bees. Ma has one bee. Pa got about 400 lbs. of honey this summer from 13. It was comb honey. Ma says that pa keeps all her honey. But she has it in a yard by itself now, and intends to keep all the bees and honey herself. She gave it some syrup yesterday. Pa's bees wintered well, and are all alive and strong.

NELLIE NICHOLAS, age 9.

Etters, York Co., Pa., March 12, 1883.

Well, the fact is, Nellie, our engravers have not yet sent the picture of the twins. Perhaps they can't make pictures of children as well as they can of old men. Don't you think it may be so? You see, they want to make a child look childish; and as our engravers are grown-up men, probably they can't do it so well. I suppose you mean by the expression "bee," a hive of bees. Of course, your pa has more than 35 *bees*, and your ma more than one *bee*. I know that in some localities they are in the habit of using the term "bee" for bee-hive, bees and all. So long as we know what you mean, Nellie, it is just as well, isn't it?

SAMUEL'S APIARY.

I go to school in winter, and work in the brick-yard in summer. I earn thirteen dollars a month, with which I keep myself in clothes. We have four stands of bees. One warm day some others came and robbed one hive. The rest are doing very well.

SAMUEL B. HUSTON, age 12.

Somerset, Pa., Apr., 1883.

Will you print some verses on tobacco if I will send them to you? My pa keeps bees, and takes GLEANINGS. I read his books too. I go to school. This is my first letter. CARRIE SHULT, age 10.

Viola, Wis., April 22, 1883.

To be sure, I will print your verses on tobacco, Carrie, if you will send them to me. I suppose you help your pa with the bees, as well as to read his books.

HARRY'S DESCRIPTION OF THE HOME-MADE BUZZ-SAW.

Papa is still making chaff hives. He is making a new saw-mill. We have a saw-mill made out of an old sweep thrashing-machine. The first bee-hive papa made, he made it by hand, and then he went to work and nailed a frame together, to see what he wanted. That big flood in February came up to the bees; and if we hadn't moved them they would have been drowned. HARRY B. DOTTERRER, age 11.

New Town Mills, Pa., April 4, 1883.

GRAPE SUGAR FOR SPRING FEED.

I thought that I would write to you. We have 52 colonies of bees. Year before last pa took about 2000 lbs. of extracted honey, and about 600 or 700 lbs. of comb. We have a barrel of grape sugar. It is the boss feed for bees in the spring — better than honey or sugar; no daubing, no robbing, and easy to feed, and it makes lots of young bees. We have Italians, Cyprian, and hybrids; also old bald honey-gatherers that beat every thing in honey harvest. Pa calls them "long livers." J. G. FOGLE, age 14.

Hartsville, Ind., April 6, 1883.

KID GLOVES, BEE-STINGS, ETC.

We had 13 colonies of bees last fall; 2 died of dysentery, and one strong hive died for want of food. Abner Strong said in his letter, that he thought it was the coal oil that made the bees sting aunt's hands, and you said that you thought it was the kid gloves; but my sister tended our bees last summer, and I was her assistant, and I wore kid gloves all the time, and I never had my hands stung once. The answer to Lucy Clark's question, "What is sweeter to the mouth than honey," is "God's word," Psalm 119:103. How many times is "yes" used in the Testament, and where is it? And also, of how many women does the Bible tell us their age?

ANNIE CAMERON.

Anderson, Ont., Can., April 23, 1883.

REUBEN'S DESCRIPTION OF HUNTING BEES IN THE WOODS.

We find where the bees drink at branches, and we take some flour and drop it on their backs; then we stay there until they go and come back, to see how long they are gone, and then find how far home is off. We course them every evening just before the sun goes down. We can see them a long distance, and can see the gnats betwixt us and the sun. When our bees swarm, we ring a bell, and sometimes we take a looking-glass and have the light right on the bees, and they will alight, and sometimes we have to take our gun and shoot among them. REUBEN DAY, age 10.

Cary, N. C., April 10, 1883.

Thank you, Reuben; the facts you give are quite important. As I understand it, you sprinkle the flour on the bees, in order to see about how far the bee-tree is off from where you start them. Then you wait until evening, that you may see the bees so much better when the sun strikes their wings in the right position. I presume most of the children have seen gnats and mosquitoes sporting in the sunshine, and at such times have noticed how plainly they can be seen, even though quite a distance off. So your folks ring bells, and flash looking-glasses, and shoot guns, do they, Reuben, when they want to make a swarm alight?

THE BEES, THE ROOSTER, AND THE BABY.

To-day is the 9th of April; the bees are busy cleaning house, and are on the maple blossoms and the maple stumps, where trees were cut down this spring. They are good little house-cleaners, but we intend going through the hives and helping them where needed. The grass is growing fast now; the farmers are starting to work in the fields to-day. The baby is sleeping now. We have an old rooster, and he comes and crows near the bedroom, and keeps me chasing him while I am writing. The more I chase him, the more he crows. I believe he does it on purpose. A bee got after him too, which made him hop. We have six young chickens about a week old. A. MAY PROVAN, age 11.

Traer, Ia., April 9, 1883.

Well, I declare, May, how vividly you bring back old times. Sure enough, roosters did wake up babies sometimes, didn't they? And I have chased them just the same way; and the more I chased them, the more they came back and crowed, and then the baby woke up, and mamma had to stop her work, all on account of an impudent old rooster. I should like to see that baby. May I not, if I come to see you?

EMMA AND HER RESPONSIBILITIES.

Father had 5 hives of bees last fall, and lost three during the winter. They had honey enough to eat, and we do not know what made them die, unless they froze to death. Father fed the other bees with the honey they had left. We wintered one swarm in a chaff hive, and they are doing nicely. We had a new bee-house built last fall. I had to do all the chores at the barn this winter, while father and the boys worked in the woods. I had the colt to train, and one horse, two cows, and 35 sheep to take care of. I can harness the horse, and drive it. I feed the hens, and bring in the eggs, besides going to school, and that keeps me pretty busy. We have got 33 little lambs now. EMMA KNIGHTLY, age 12.

East Waterford, Maine, April 23, 1883.

Why, Emma, I should think you would be real happy with the colts and the cows and the sheep and the lambs and the hens, and all the rest. It just makes me wish I were a little girl, and lived on a farm, when I hear you tell of it. Then, you see, I shouldn't have any great big factory to look after, and so many things that we have all the time getting "out of fix," if I didn't happen to be around just in time. Do you see I have got the word "responsibilities" at the head of your letter? I wonder if you know what "responsibilities" means. I do, if you don't.

BIBLE QUESTIONS, BY CHARLEY MILLER.

You ask if any one can tell where in the Bible the verse beginning with "Be not weary in well doing" is to be found. It is in Gal. 6:9. The rest of it is, "And let us not be weary in well doing, for in due season we shall reap if we faint not."

In answer to Lucy Clark's question, I would say that I can not find any answer to her question. Did she take it from Judges 14:18? if so, she will notice that there is no answer to it, as she will find it is the answer to the riddle in the 12th verse of the same chapter.

Father is feeding sugar at the rate of over 50 lbs. per day. He also feeds rye meal.

Marengo, Ill., April, 1882. CHARLES MILLER.

Lucy's question is answered in another place, as Charles will see by reading Psalm 119:103.

OUTDOOR FEEDING AND ROBBING.

My pa wants me to write a letter to you, to ask you a few questions about bees and queens. He was feeding his bees on the 10th of April, outdoors, and when he came from his work, about noon, to fill up his feeder, he walked in front of each hive to see how they work. When he came to one hive they were so cross that a dozen or more went for him, and stung him in the face. They were hopping and running around the entrance, and when a bee came near they would catch her on the wing. Pa stood a while there, and then he saw a queen flying around in front of the hive, and was trying to get in; but they wouldn't let her. They sometimes chased her on the wing. Pa opened the hive in the evening, and found no queen and no eggs — only two or three hatching bees. What was the cause of that? Is that wheelbarrow full of books yet?

CAROLINE D. FAUSNIGHT.

Middle Branch, O., April 11, 1883.

It was the outdoor feeding, Caroline, that made the trouble. No one should undertake this who is not an old practiced hand. In the case you mention, the bees got so crazy about the feed that they forgot to leave sentinels, as they usually do, at the entrance of the hives, and the bees from some other hive quickly discovering the fact, walked right in and carried off all their honey. After they did this, the poor queen, not knowing what to do, got crowded out of doors in the general melee. Pretty soon the colony was all broken up, and nothing was left except the few bees just hatching. Your father might have saved the queen, if he had caged her when he found her outside. I have seen the same thing happen a great many times when feeding bees out of doors. Every colony should be carefully watched to discover any attempt at robbing, at the very outset. One who is not a practiced hand might find this difficult to do; therefore I would say, be very careful while feeding in the open air.—The wheelbarrow is yet full, and more too.

HOW THEY HIVE THE BEES AT BERTHA'S HOUSE.

I have not seen any description of the way father hives bees, either in JUVENILE or mother GLEANINGS. It is this: When we hear the bees swarming we ring a bell, which we keep for that purpose, to call one of the men. Mamma and I try to find where the bees come from, because father overhauls them about a week after they swarm, and removes all but one of the queen-cells to keep them from swarming again.

THE "DISH-PAN" HIVER.

When father or Edgar arrives he gets a hive, nine frames, also one comb from the old hive, which must have unsealed brood in it, a large tin dish-pan, for which we have a cover a little wider than the top of the pan, made by sewing cloth on to a wire hoop which is two inches wider than the pan. We think a pan preferable to a sack or basket, because the bees do not stick to it. When the bees have settled they are shaken into the pan, which is held in the left hand, and covered with the cloth; and when they become quiet, which they do in a few minutes, they are poured out on a large sheet of zinc, in front of the hive, and they crawl in.

The verse, "Be not weary in well doing," is found in Gal. 6:9, and in II. Thes. 3:13.

How many of the Israelites went into the land of promise? BERTHA HALLETT.

Galena, Ill., April 25, 1883.

FASTENING THE BEES IN THEIR HIVES WHILE IN THE CELLAR.

I have been reading the JUVENILE, and I found out how old you are. You are 43 years old; am I right? Can you guess how I found out? Papa took his bees out of the cellar the 2d of April—42 hives; they were all alive. He thinks it isn't a good plan to take the wire cloth away from the entrance, as many bees crawled out on the cellar bottom and died.

We have kept bees now six years; never lost more than one swarm in cellar, and this died for want of feed. We have kept entrances closed with wire cloth, and never had any trouble melting comb. We put our bees in the cellar the 1st of Nov.; took them out for a fly the 2d of April. An old bee-keeper told me a while ago that no bees would leave their hive if the cellar was dark. I opened mine for a while, and so many bees have come out that some are weak; 42 were in the cellar, and 42 out.

EDITH M. HALL.

Northfield, Rice Co., Minn., Apr. 8, 1883.

You are right, Edith; I am just 43 years old. I believe I agree with you about fastening bees in while in the cellar. Few things annoy me more than having dead bees around on the floor, ready to be stepped on when anybody passes along. While we had our bees in our bee-house, we had them fastened in with wire cloth over the whole top of the hive, and, so far as I can recollect, no unpleasant consequences followed. I know they will sometimes stay in their hives by simply keeping the cellar dark; but as at other times they won't stay, I think I prefer the wire cloth.

A HINT ON TRANSFERRING, BY A 14-YEAR-OLD BEE-MAN.

I will give you my plan for transferring, after trying every plan I ever heard of. James Heddon's plan is very good at swarming time, but will not answer very well any other time. Take 3 smooth boards, sometiing longer than the L. frame—one to lay over the box hive. Do not drum the bees, but cut out 2 cornners of the hive, and cut loose one side from the comb, and then commence taking out the combs and use the 2 boards for tacking on strips, and for turning frames over with. As soon as you get one or two combs in the new hive, take your board by one end and slip the bees into the new hive, and return the board over the old hive, and continue until all the combs and bees are in new hive. Take all scraps and pieces of honey, and put them on top of the frames; put on the quilt, and the bees will carry down all the honey. In 3 or 4 days, lift the quilt; clear off all pieces of comb, and take off the strips. The strips are fastened with 3-oz. tacks. They are the best I have ever tried.

HARRY GRIFFIN, age 14.

Shadwell, Albemarle Co., Va., Apr. 30, 1883.

Thank you, Harry. As I understand it, your improvement is principally in laying one of your transferring-boards over the top of the old box hive. As the bees naturally crawl up, after being driven out of the combs, or smoked from them, they cluster on the under side of this board. And as often as they cluster, you have only to lift the board up and shove the bees off into the new hive where you want them. We have often practiced pretty nearly the same thing. Your plan of laying broken bits of comb on top of the frame until the bees have taken all of the honey out is just the way we have always done. When empty, the bits of comb go into the wax-extractor.

KIND WORDS FROM OUR CUSTOMERS.

I have carried a Waterbury watch for the last 18 months. It has given me first-class satisfaction for keeping good time. It can not be surpassed.

GEORGE H. CALVERT.

Lindsay, Ont., Can., Jan. 13, 1883.

The fdn. more than suits me; also your way of packing is No. 1. Last fall I packed 64 colonies of bees on summer stands; found one queenless, and one starved this spring. G. H. DENMAN.

Pittsford, Mich., Apr. 17, 1883.

The five smokers and eye-glass came promptly to hand, and all in good order. There may be better smokers at higher prices, but I should think your Clark smokers ought to please the most fastidious.

Lucas, Ohio, April 18, 1883. Z. BLISS.

TRANSFERRING-WIRES.

Will you please send me 100 transferring-wires? They are the best and handiest thing I ever used for that purpose. LEWIS METCALF.

Reedsburg, Wayne Co., O., Apr. 23, 1883.

This is to inform you that I have received the goods, and I am satisfied. It is what I should think fair and very prompt dealing. I would not take $2.00 for my smoker if I could not get another one.

April 24, 1883. FILLMORE DECKER.

Find inclosed 90 cents, and please send in return the Story of the Bible. I think it is one of the best books for children I have ever seen.

DENNIS SHAFER.

Dawn, Darke Co., O., April 6, 1883.

We have opened and examined every article, and find all correct, and eminently satisfactory. We dearly love such business. F. W. JONES & BRO.

Coral Hill, Ky., March 10, 1883.

[So do I, friend J.; but we can't always do it so.]

I can not accept your offer to send GLEANINGS for 1883, for half price. I knew that I was taking the risk in inclosing a $1 bill. But as I have so often done this I felt no uneasiness, and now I believe that my $1 will turn up all right. I once had $5 go astray, but it got back all right. My own fault in not directing it properly.

Shelbyville, Ill., Mar. 17, 1883. J. W. JOHNSON.

[Many thanks for your very kind words, friend J., and for your fair and liberal way of insisting on standing the whole loss. It cheers the pathway in life.]

The colony of bees I received of you in the spring of 1881 has prospered finely under the management laid down in A B C. If its teachings are carried out properly, there is no chance for a failure. They cast the first swarm on the 27th of May last, in the midst of fruit-blossoms, followed by three after-swarms. I took 150 lbs. comb honey, and built up three colonies (nuclei), making eight in all. They wintered finely, packed in chaff, all of them coming out in good condition; and if they continue to push matters as at present, I expect to have some swarming about fruit-blossom time. They are working strongly on the maple at present, which is quite plentiful in this vicinity, being a great advantage to them. If the season proves a good one, I intend to increase to 40, and get some honey too. It looks a little big, but nevertheless I intend to try. C. H. HUBER.

Rural Valley, Pa., April 23, 1883.

I received your monthly and price catalogue, and am well pleased with the same. I intend to go into the bee and honey business. I have not got the money yet, but I think you will hear from me this fall. I have had no experience. I think the best thing I can do is to join your A B C class, and subscribe for GLEANINGS, get some of your implements, and away I go. I have read and looked your publications through. By the tone of what I read in them, I take you to be a brother in Christ; and as such I have faith in what you say. I have been humbugged some since I have been in this world. I am a Pennsylvanian, 35 years old. I notice some bees come on hickory stumps where I cut the tree. I think they are wild. I will run a little risk, and send you a little money in a letter for a bee-hunting box.

J. W. WISE.

Verona, Lawrence Co., Mo., March 5, 1883.

[May God bless you for your kind words, friend W. If any thing in our deal should ever be wrong, I trust you will be kind enough to tell us so.]

HOW I GOT INTO IT.

Three years ago a gentleman came to me to purchase some bees in an old box hive; and in the conversation he spoke of A B C and GLEANINGS, which he said taught the new system of bee culture. I asked the price, and found one hive would get both; so I requested him to order them immediately, selling him 3 or 4 hives.

The books soon came; I glanced at Medina, O., and commenced to read with suspicion, simply because the idea of Yankee trickery had crept into my mind like a great long old ugly snake, and coiled itself all round in there, of its own accord; but, lo! when I read on page —, A B C, where the engineer stopped "10 minutes of noon," etc., I "kind o' wilted," and the old snake got a blow on the head which made him begin to unwind and move, and he has continued to move until I see clearly a great number of good men all over the North, whom I have learned to love, and especially a little bald-headed fellow about Medina, living in a new house, but who has no new baby, like a fellow in Texas, who ought to have less hair and more brains. Of course, I continued to read and act, shipping the first Simplicities, perhaps, that came to this part of the State; and I do not pretend to say what my little apiary is worth; but I would part with it more readily than with what has been developed by that little incident—the man coming to buy bees.

Mr. Root, did you send him? I am inclined to believe you did. Strong and powerful man, who in secret kneels down and then dispatches telegrams round the world, he knows not to whom, and I am in debt to somebody—who is it? Now, since I am through my piece, and it don't sound well to me, you may open the stove-door and put it right in the flames. J. H. RODERICK.

Dodd's City, Tex., Feb. 19, 1883.

[May God bless you for your kind words, friend R. Let us try to think it was God who sent the man to your house to buy the bees, and that it is God who is sending us blessings every hour in the day, if we will only receive them as such.]

I have tried the fdn. mill, and would not give it for a load of rubber plates. C. A. HATCH.
Ithaca, Richland Co., Wis., Apr. 20, 1883.

OUR $4.50 PLATFORM SCALES.

The scales that I brought from your factory when I was there weigh as well as the high-priced ones. I would not take $8.00 for them if I could not get another pair. D. BUTTERS.
Bloomingdale, Mich., May, 1883.

Your A B C book is just what I wanted, and I am much obliged to you for explaining every thing so carefully; and if I have a dollar left when I get my chaff hives finished, I will invest it in GLEANINGS. ANNA GRAY.
Adams, Gage Co., Neb., April 25, 1883.

I received the goods in fine order; never saw goods better put up for shipping. I am well pleased with the thin foundation for sections. I am disappointed in the Clark cold-blast smoker; it is A No. 1; throws clouds of smoke. I could smoke down yellow-jackets with it. E. E. SMITH.
Pittsford, Mich., April 13, 1883.

I received the A B C in due time; and to say we were not greatly surprised would not be doing it justice. We are both well pleased with it. My wife says it is just the thing, and the book she has always wanted. I do not see how you can furnish so large and valuable a book for such a price. We are highly pleased with this great work, and your good and kind words to the little ones, and all, so that we must certainly be asked to be remembered among the many friends you must surely have.
Goodland, Ind., April 16, 1883. H. F. CURRENS.

A GOOD REPORT FOR THE GLASS NEST-EGGS.

The eggs and other articles came safe. Thanks. But these handkerchiefs are marvels for cheapness; but those eggs are the boss. The hens nearly cackled themselves to death looking at themselves in those glass eggs, and tried to fill every nest with fine large eggs to match those large ones. I sent and got some wooden eggs last spring, but they did not like them. They would kick them all out of the nest. Good luck attend you, my friend.
MRS. NELSON KELLY.
Ferndale, Whatcom Co., Wash. Ter., April 15, 1883.

THE A B C BOOK.

A B C at hand, with many thanks. This really is "pressed down and running over;" it has paid me more than twice its cost already. Picture to yourself a man in a dilemma, not knowing what to do, when a friend steps up and says,—

"What's the matter?" While I point and say,—

"Look there." And he says,—

"Oh! we'll soon fix that."

Well, that friend was A B C. May the good Lord bless and prosper you in your work of love and charity! JAS. BEATON.
Highgate, Kent Co., Ont., Can., May 1, 1883.

I do not know how to acknowledge your kindness to a poor little girl. Please accept my heartfelt thanks for A B C and GLEANINGS; also for your promptness in sending sample sections and foundation. Papa has prayer and reading of the Bible morning and evening, and he does not forget Mr. Root's kindness to his little girl. Papa says I must work hard, and pay Mr. Root for A B C and GLEANINGS. He says they are worth five dollars; he says he will help me all he can. I was going to write about bees, but I could not help trying to thank you in my uncouth way for your kindness. *
Valley Point, Pa.

BETTER THAN SAMPLE.

I received goods to-day. I am well pleased with them. Every thing came in good shape, except smoker, which was jammed, but I think I can straighten it so it will be all right. The foundation is much brighter than the samples you sent.
J. C. MERRIMEN.

[I am very glad, friend M., if you find the goods better than the sample I think it was friend Heddon who said fdn. manufacturers always sent out a better sample than the good they furnished. In our case it happened to be the other way this time. Perhaps we don't always do as well as that.]

THE JONES PAILS.

The 2-lb. Jones pails make the nicest package of extracted honey I ever saw, and will sell at sight, and the smokers are greatly improved.
JOHN DIEFFENBACH.
Crosskill Mills, Pa., Apr. 30, 1883.

A KIND WORD FOR RAILROAD OFFICIALS, ETC.

Goods received O. K. The smoker is a perfect gem. The A B C book is much neater and larger than I expected. Express charges were very reasonable. No delays. All railroad agents are not so very bad men. Our agent here is a gentleman in every respect. L. H. WILCOX.
Farmington, W. Va., Apr. 28, 1883.

I will tell you how to publish GLEANINGS semi-monthly. Just take some of the matter intended for GLEANINGS Sen., and put it with Junior GLEANINGS, making one thinner and the other thicker, retaining a juvenile department, thus equalizing the weight and thickness of both. Bind both as you now do GLEANINGS Sen., with the same neatly gotten-up cover. You are giving us a "thundering sight" of good bee matter, any how, for one dollar. If you can do this without raising the price, all the better; if not, put on what will justify the change, and I think very few will "squeal." Shall I give you a report of my wintering? I am only a little bee-man, anyhow. C. GARWOOD, 858.
Baltimore, Md., May 6, 1883.

We thank you for your promptness in replacing the first queen sent. In fact, you were almost *too* prompt for us, as we had no queenless colony, so we thought we would catch a virgin queen from a certain colony. In our manipulations, the young queen and a good many of the bees flew away and clustered on some brush near. Taking a frame of brood from an old colony, we hived them in a new hive, and proceeded to make sure there was no queen left in the colony. We failed to find any, or any cells; so we turned the Italian queen on to a frame of brood, and covered her with a wire cage. The instant she touched the comb she dove into a cell and took a good meal of Florida honey. H. S. ALLYN.
Orange City, Fla., Apr. 16, 1883.

I wish to thank you, friend Root, for the many courtesies we have received from you, as well as for your excellent journal. I am not a bee-man. I fear I never shall be; have had nothing but losses and troubles with them since I first read a copy of GLEANINGS and became interested in them. I have spent some 50 or 60 dollars, and have now three weak colonies, and one of them queenless. I have, however, derived a great deal of pleasure in reading GLEANINGS and A B C, and other bee publications; but now my A B C is loaned to some one who has forgotten to return it, and I have forgotten who, as I loaned it until it was nearly worn out. My smoker, too, has been loaned until it was nearly worn out, so I had some benefit from them in that way. Now, friend Root, I do not want to see my name in print. I am writing this as a personal letter. I am not a Christian, as you and my folks are, but know that you are doing a good work. After using tobacco 25 years to excess, I have quit the habit. I would sooner think of paying you for a dozen smokers than ask one for doing right. I have saved more than the price of a gross of smokers in the last 18 months, in cigars and tobacco alone. I am not overestimating the amount, and must confess to you that the Lord has been better to me than I deserve, as I have no desire for tobacco. J. M.

[But, friend M., your experiences are so very valuable I feel we must have it for print, and I take the liberty of using it, suppressing your name, as you see. You say you are not a Christian; but it seems to me you are in spirit, even if you don't stand so before the world. Your concluding sentence persuades me that your duty stands clearly before you, and that nothing more is needed for you to do, except to stand up before men and acknowledge your Lord and Savior, Christ Jesus. Come with us, and be a soldier of the cross. I will pray for you, and I am sure others will. I am very glad indeed to hear your testimony on tobacco, and I am glad to see that you fully realize the amount you have saved by giving it up. That single item alone ought to be a strong motive for others to go and do likewise.]

Juvenile Gleanings.

MAY 15, 1883.

Contents of this Number.

Apis, The....................281
Bee-eater....................283
Bee-boy, The Little..........283
Bible Questions..............288
Drones, To Kill..............286
Fastening Bees in Cellar.....289
Fire, Danger of..............280
Gloves, etc..................288
Hives, Observing.............281
Honey, To Whiten.............287
Hunting Bees in Woods........288
Kind Words...................290
Married......................284
Minneapolis Mills............287
Mrs. Harrison's Letter.......284
My Neighbors.................277
My Visit.....................280
Outdoor Feeding..............289
Pollen from Cottonwood.......286
Railroad Officials...........291
Short-hand...................282
Sunflower Honey..............286
Virgil.......................279
White's Blasted Hopes........282

He that tilleth his land shall have plenty of bread.—PROVERBS 28:19

GLEANINGS for Jan., 1883, is out of print. We will pay 10 cents each for them. Please put your name on the wrapper, and drop us a postal.

WAX.

WE have now a fine lot of wax on hand, perhaps a couple of tons or more, and it is coming in so freely that the prospect is, that the price will soon drop. However, we will, until further notice, pay 35 cents cash, or 37 cents trade for fair wax.

THE Clark smoker seems destined to go beyond any thing heard of before in the line of implements for the apiary. We purchased, in one single lot, one ton of wire for making the springs. Ernest estimates that this quantity, at the rate they are going, will hardly suffice for this present season. Just think of it, friends; a ton of springs!

WE have just got hold of the little book called "John Plowman;" and by taking a quantity, we are enabled to sell them at 10 cts. each; by mail, 3 cts. extra. The book contains 40 pictures and 122 pages, and was written by the great English minister, Chas. H. Spurgeon. The book is so full of wholesome instruction that I feel happy every time I sell one.

ROTTEN WOOD FOR SMOKER FUEL.

BY advertising in our county paper, we have received some very nice rotten wood for smokers. It is broken up into pieces just right to put into the smoker, and it is dry, rotten elm that ignites readily with a match, and can scarcely be put out without wetting it. We have it put up in sacks holding two bushels each, and we offer it for 50 cts. a bushel, sacks and all. Probably most of you can get it out of any of your forests, cheaper than you can buy it of us; but if you can't, when you are ordering goods have a sack sent along for a sample. As it is pretty light, it could be shipped by express without very much expense.

THE RUSH FOR SUPPLIES FOR THE APIARY.

WE are now in the midst of the greatest demand for supplies for the apiary, probably, ever known before. We have, perhaps, in our works, and orders on hand, $5000 to $10,000 worth of goods. The question comes up now, about delays on orders. The number of hands we have employed, and the way the orders are necessarily scattered about all over our establishment, it is quite difficult indeed for us to tell how soon orders can be filled. It may be two or three weeks, or it may be convenient for your order to be filled to-morrow. Another thing: It hinders the clerks greatly, as well as the workmen in the rooms, to go to work and hunt up an order. Very often, time enough is consumed in trying to trace an order, to have boxed it up and sent it off. It has been suggested that we should refuse to receive any more orders. My friends, this would hardly be practicable, because we should not know what orders to refuse. In reviewing the bills of to-day, I find an order filled that was received yesterday; and on inquiring how it obtained preference over so many others, I was told the man wanted only two chaff hives complete, and these happened to be in stock ready to be shipped, and so they were simply marked and sent off. Now, this is the case with a great quantity of our goods; in fact, with nearly all of the goods from the counter store. It is also the case, to a certain extent, with hives, etc. One day we may have a great quantity ahead; the next, the orders may take the whole of them. All I can promise to do is this; that we will send your goods just as fast as we possibly can; and any time when you get tired of waiting, we will promptly return your money. With the piles of orders before our office clerks, however, it may take a day or two before we can find your order and get your money back. Another point: Several have written to us complaining of the delays from other factories, and stating that they have withdrawn their orders from them and sent them to us so as to get their goods *at once*. I wouldn't do this, friends.

One plain remedy stands out sharp and clear, and that is, to order your goods before the middle of May, and just on the eve of the swarming season. Past experience indicates that orders begin to drop off somewhat by the first of June. Therefore it is quite likely, with our present force of workers (about 110 in all) we shall have pretty much all of our orders filled in three or four weeks. I mention this, that you may know how to decide intelligently about ordering your money returned.

Before blaming us very much for this state of affairs, bear in mind that we are building a new factory, on purpose to be able to meet such emergencies, and we are doing all we possibly can to be able to avoid these very annoying delays. Our freight has increased to such an extent that we now have two large cars run up on our branch track, that are filled with goods, and sent off daily. If you could see the great stack of boxes and bales that are daily loaded up, you might think that at least *some* credit was due us. Orders by mail and express still go off as fast as received.

Do you want to know how you can help us greatly in facilitating the filling of your orders? You can do it this way: Call things *just as they are called* in the price list, and *give prices*. Use plenty of paper, and write plainly; but don't put any thing *on the same sheet* with your order, except business *absolutely necessary* for the filling of such order. Bear in mind, that what you write with your orders must be read by several clerks, and sometimes by those who are comparatively new in the business.

LATER.—Just before going to press, we have decided, in view of the great number of orders on hand, to send at once such a part of your order as we can, and the remainder at another shipment, as we think this will better please you, as a general thing, than to hold goods that are ready, for other things that are not ready. Please don't complain when you find that we have done this.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany....................303
Bee Entomology..............—
Blasted Hopes................—
Editorials 335
Forgettery.........................—
Heads of Grain..............320
Honey Column..............296
Humbugs and Swindles 329
Ladies' Department 328
Notes and Queries............330
Obituary.........................—
Remindery ....—
Reports Encouraging.......—
Smilery..........................308
The Growlery............... —
Tobacco Column.............335

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Alsike.......... 323
Apiary, Site for..............311
Arkansas.......................330
Banner Apiary..............297
Basswood Supply......... ...319
Beeswax, Refining..........302
Bee-keeping for Women....328
Bee-keeping, Restricting.. 315
Bee-traps..................... .320
Bee, The Coming.. 304
Bees, Burying...............325
Bees, Setting Out...........323
Bees, Wintering Many......303
Bees, Syrio-Italian......310, 321
Bees, Educated..............315
Bees, Distance they Fly.....298
Bee Culture for Students.. 300
Bees for Honey..............319
Bees Killed by Exposure 299
Bees 90 Miles an Hour...301, 314, 322
Boomhower's Bees..........309
Box-Elders 318
Boxes, Putting on...........327
Brood-chambers, Small.....304
Buckeye.........................299
Burnett on Honey, etc......319
Buzz-saws, etc. 324
California......................320
Canada 302
Carpet-stretcher.............326
Case and Crate 315
Chaff Packing................325
Clamp 322
Cleansing Flight............324
Combs Full of Honey...330, 336
Cook's Manual...............337
Doolittle 304
Drone Theory................299
Drone vs. Worker Fdn......328
Electric Light...............320
Eggs, Transferring.........299
Eggs, Several in a Cell......302
Extractors, Use of..........327
Feeder, The Boy's...........322
Feed and Feeders............312
Flies........... 322
Florida.................308, 316
Forest-leaves............313, 321
Fdn., To Use............ 302
Fradenburg's Success 308
Granulated Honey..........320
Grape Sugar.......... 312
Heddon's Letter.............315
Hill Device....................319
Hives, Size of................311
Hive and Frame 311
Honey Vinegar..........321, 326
Honey, Willow.............. 329
Honeysuckle..................303
Mesquite-tree 303
Mice in Apiary 322
Mirrors, Using in Swarm's.299
Muth's Picture...............306
Oregon 329
Pasturage, Artificial........325
Patents, etc...................305
Plaster Plates.. 324
Pollen and Dysentery.......304
Pond's Experiments.........313
Queen-cells, To Get..........326
Queen, Swapping a..........326
Queens, Maimed.............326
Queens, Two in a Hive......330
Queens, To Introduce.......312
Queens, 2 in a Swarm.......299
Queens Tested by Buyer....314
Room, Plenty of.............310
Runaway Swarming.........298
Sage of Ohio..................303
Sages of California..... 301
Saws, Foot-power....... 319
Shade for Bees...............298
Smothering....................321
Stenographic Writing......314
Stings...........................323
Sugar, Granulated 322
Swarming, etc............. .299
Swarming in May.......306, 330
Swarming without Clust'g.299, 305, 323, 325, 326, 327, 330
Texas...... 328
Ventilation, Sub-earth......330
Vetches.........................303
Weather, Bad.................330
White's Article...............312
Willows 298
Willows and Dead Bees.....330
Wiltse on the Bee...........310
Windbreaks in Winter......300

ATTENTION!

FULL COLONIES OF BEES, NUCLEI, QUEENS, FOUNDATION, SECTIONS, SMOKERS, HIVES, AND ALL APIARIAN IMPLEMENTS CONSTANTLY ON HAND. FULL COLONIES AND NUCLEI A **SPECIALTY.** SEND FOR CIRCULAR AND PRICE LIST TO

FLANAGAN & ILLINSKI,

BOX 819. BELLEVILLE, ST. CLAIR CO., ILL.
6-12d

SEND YOUR ADDRESS

to CHAS. R. MITCHELL, HAWKINSVILLE, GA.,

for circular of Italian Bees, Queens, Silkworm Eggs, etc., at reduced prices. 5tfd

BEE-KEEPERS' SUPPLIES.

It will pay to get our prices before purchasing your supplies. Good Langstroth Hives, with 8-inch cap, frames, quilt, etc., in the flat, 60 cents each. Manufactured from good pine lumber. Workmanship unexcelled. Crates and Sections cheap, and Dunham foundation a specialty.
WM. O. BURK,
Successor to Hiram Roop. CRYSTAL, Mont. Co., Mich.
5-7d

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian supplies. Send for circular. 1tfd

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 4tf
*Paul L. Viallon, Bayou Goula, La. 4tfd
*S. F. Newman, Norwalk, Huron Co., O. 4tfd
*Wm. Ballantine. Sago, Musk. Co., O. 4tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2
*J. P. Sterrit, Sheakleyville, Mercer Co., Pa. 2-7
Bates & Miller, Barrington, Bristol Co., R. I. 2-6
*Chas. R. Mitchell, Hawkinsville, Pulaski Co., Ga. 2tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
*Dr. A. B. Mason, Wagon Works, Lucas Co., O. 2-8
*Jas. O. Facey. New Hamburg, Ont., Can. 2tfd
F. J. Wardell, Urichsville, Tusc. Co., O. 3-9
*S. C. Perry, Portland, Ionia Co., Mich. 3tfd
*J. H. Reed, Orleans, Orange Co., Ind. 3tfd
M. Isbell, Norwich, Chen. Co., N. Y. 4-9
*C. C. Vaughn, Columbia, Maury Co., Tenn. 4-8
*J. W. Keeran, Bloomington, McLean Co., Ill. 4-9
*Oliver Hoover, Clyde, Sandusky Co., O, 5-10
*Ila Michener, Low Banks, Ont., Can. 5-10
*D. G. Edmiston, Adrian, Len. Co., Mich. 5tfd
*D. M. Weybright, New Paris, Elk. Co., Ind. 6-7
*F. G. Cartland, High Point, Guilford Co., N. C. 5tfd
*Rev. C. B. Curtis, Selma, Dallas Co., Ala. 6-8
*Jas. A. Nelson, box 83, Wyandott, Wy. Co., Kan. 6-5

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 4tfd
M. S. West, Flint, Gen. Co., Mich. 1-6
L. E. Mercer, Lenox, Taylor Co., Iowa. 4-3

SEND FOR PRICE LIST OF

Langstroth, Simplicity, & Chaff Hives & Supplies,

S. D. BUELL, UNION CITY, BRANCH CO., MICH. 4tfd

QUEENS!

SCIENTIFIC BREEDING TELLS.

If you want the best and most beautiful queens, try our strains, which we have obtained by long and skillful breeding. Orders filled promptly, and satisfaction guaranteed. Circular free.

E. A. THOMAS & CO.,

COLERAINE, - FRANKLIN CO., - MASS.
5tfd

FULL COLONIES

Italian Bees with Queen

In Root's Simplicity Hive, $7.00.

E. D. GILLETT, BRIGHTON, LORAIN CO., OHIO.
5-6d

IMPORTED QUEENS.

In April, - - - - - -	11 francs in Gold.
May and June, - - - - -	10 " " "
July and August, - - -	9 " " "
September and August, - -	7 " " "

No orders received for less than 8 queens. Queens which die in transit will be replaced only if sent back in a letter. 1-6d

CHARLES BIANCONCINI & CO., Bologna, Italy.

AT KANSAS CITY, MO.,

I BREED PURE ITALIAN BEES FOR SALE.

Dollar Queens, in June...	$1 25
" " after June.......................	1 00

Tested queens double the above prices.

Bees per ½ lb., same prices as dollar queens.

I *warrant* my *dollar queens* to be purely mated. I do not know that I have a single dissatisfied customer; but if there are any such, and they will write me in regard to the matter, I will do the best that I can to render satisfaction.

3tfd **E. M. HAYHURST, P. O. Box, 1131.**

VANDERVORT COMB FOUNDATION,

ITALIAN, CYPRIAN, and HOLY-LAND QUEENS.

I. L. SCOFIELD, 3-8d

CHENANGO BRIDGE, - BROOME CO., - N. Y.

SAVE MONEY!

Nuclei, 3-frame and tested queen - - - -	$3 50
Nuclei, 3-frame, untested " - - - -	3 00
Nuclei, 4-frame and tested " - - - -	4 50
Nuclei, 4-frame, untested " - - - -	4 00
Tested queens, after May 15 - - - -	2 00
Untested queens, after May 15 - - - -	1 00
Full colonies in Simplicity hives, - - - -	8 00

Will ship full colonies in April. I will guarantee every thing I send out to be first-class.

3tfd DAN WHITE, New London, Huron Co., O.

PURE ITALIAN QUEENS,

Carefully bred from imported and home-bred mothers. Sent by mail. Safe arrival guaranteed. No black bees near.

1 untested queen before July 1, $1.25; after, $1.00
6 " " " " 1, 6.50; " 5.50

Tested queens, nuclei, and full colonies.

PLYMOUTH-ROCK FOWLS.—Eggs from this justly celebrated breed of fowls, $1.25 per setting of 13. Send for circular free. J. H. REED, Orleans, Orange Co., Ind. 3tfd

MUTH'S
HONEY EXTRACTOR,

SQUARE GLASS HONEY JARS,
TIN BUCKETS, BEE HIVES,
HONEY SECTIONS, &c., &c.

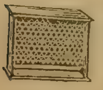
Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers." 1tfd

THE VERY BEST

Italian and Holy-Land Queens; also Apiarian Supplies at prices to suit the times. Circular free.

GEO. H. KNICKERBOCKER, PINE PLAINS, N.Y.
5-8d



FLAT-BOTTOM COMB FOUNDATION.—High side-walls, 4 to 14 square feet to the lb. Circular and samples free. J. VAN DEUSEN & SONS, Sole Manufacturers,

4tfd Sprout Brook, Mont. Co., N. Y.

DADANT'S FOUNDATION.

—UNSOLICITED TESTIMONIALS.—

Nothing is better; your fdn. suits exactly.
Cincinnati, O., Oct. 23, 1882. CHAS. F. MUTH.

The finest and brightest I ever saw.
Adamsville, O., March, 1882. GREEN R. SHIRER.

Best I have used; no breaking down; bees take it readily. W. B. SPENCE, Sidney, Ohio, Aug. 31, 1882.

I like it better than any offered by dealers.
Baltimore, Md., Jan. 24, 1882. C. H. LAKE.

It is the nicest I have used. D. KEYES.
Louisville, Ky., June 20, 1882.

It is the best I ever saw. GEO. WUSTUM.
Racine, Wis., July 19, 1882.

Willing to pay 2 cts. per lb. more than for any I have seen. F. WILCOX, Mauston, Wis., Mar. 23, 1882.

The most perfect article that I have seen.
Christianburg, Ky. G. W. DEMAREE.

Very well satisfied. Bees worked on it finely.
Avon, St. Genevieve Co., Mo. WM. BLOOM.

Have used about 75 lbs. from ——, but I prefer yours. REV. W. BALLANTINE, Sago, Ohio.

Your foundation is the best. J. W. PORTER.
Charlottesville, Va., March 25, 1882.

The nicest I ever received. H. W. FUNK.
Bloomington, Ill.

Your fdn. beats them all. Bees draw it out faster. JOS. CROWDEN, Remington, Ind.

Ahead of any fdn. maker of the world.
Borodino, N. Y. G. M. DOOLITTLE.

I concluded to send to you, even if express is higher. Council Grove, Kan. D. T. NORTON.

I never saw any nicer. G. TISDALE.
Westfield, N. Y., March 31, 1882.

Better than any I have ever had. J. B. MASON.
Mechanic's Falls, Me.

Well pleased with the foundation.
Council Bend, Ark. GEO. B. PETERS.

We are working on a new set of machinery made expressly for us. But, friends, remember that, to fill all the orders, we need wax; and if you have some, please write us. We will pay a high price for it. Send for our retail or wholesale circular, with samples free. We sell also colonies, queens, and supplies. **CHAS. DADANT & SON,**

2tfd HAMILTON, HANCOCK CO., ILL.

GEORGE W. BAKER,

—OF—

Lewisville, Henry Co., Ind.

Has 3000 New Illustrated Circulars (to give away) of

ITALIAN BEES, QUEENS,

Plymouth Rock & Brown Leghorn Fowls.

EGGS FOR HATCHING.

Also Extractors, Honey-Knives, Smokers, etc., etc. 3-2d

HEADQUARTERS FOR

Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular, containing directions for introducing queens, remarks on the new races of Bees, &c. Address

1tfd DR. J. P. H. BROWN, Augusta, Ga.

VON DORN'S FOUNDATION

GIVES SATISFACTION.

Recommendation: 300 per cent increase in sales in 1882. BEESWAX WANTED. Send for circular.

3tfd M. C. VON DORN, 820 S. AVE., OMAHA, NEB.

E. T. LEWIS & CO., TOLEDO, OHIO, Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

Bingham Smokers

PER MAIL, POSTPAID.

The Doctor Smoker,	3½x14-in. stove,	wide shield	$2 00
Conqueror "	3x14- "	" " "	1 75
Large "	2½x12- "	" " "	1 50
Extra "	2x12- "	" " "	1 25
Plain "	2x12,	narrow shield......	1 00
Little Wonder "	1¾x10,	" "	65
Bingham & Hetherington's Uncapping-Knife..			1 15

Our smokers all burn sound wood, and do not go out. Sent by mail on receipt of price.

Address BINGHAM & HETHERINGTON,
6tfd ABRONIA, MICH.

Look Here!

If you have not seen M. B. Moore's new circular, of queens, it will pay you to send for it at once. Warranted Queens in June, only $1.10, and a 25 cent specimen free with each order. Now is your chance.
6d M. B. MOORE, Morgan, Pendleton Co., Ky.

FOR SALE.

A limited quantity of *Fresh* Vandervort light and heavy Foundation, of improved style, made on new machines. Also Wire Nails and Tin Points.
6d C. R. ISHAM, Peoria, Wyo. Co., N. Y.

FOR SALE CHEAP!

About two acres of land, with dwelling-house and other improvements. Also 25 stands of bees in Root Simplicity and Van Deusen-Nellis hives. Situated about 300 yards from L. & N. R. R. depot, in the village of Grand Bay, Ala. For further information, address **J. J. DAVIDSON**, Grand Bay, Ala. 6d

THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, semi-monthly. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan., 1883. Will guarantee safe arrival of every number.
A. I. ROOT, Medina, Ohio.

JUST OUT!

New Circular, and price list of Bees, Queens, and STENCILS for bee-keepers' use. 4-9d
JOS. M. BROOKS, COLUMBUS, BARTHOLOMEW CO., INDIANA.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

SEND postal for my 20-page price list of Italian, Cyprian, and Holy-Land Bees, Nuclei, Queens, and Apiarian Supplies.
4tfd H. H. BROWN, Light Street, Col. Co., Pa.

NOW a limited number of Fine Italian Queens; also, Bees by the Pound, *cheap*. Apply to
6 E. H. COOK, Andover, Tolland Co., Conn.

SPLENDID QUEENS this month, $1. each; six for $5.50.
6d F. L. WRIGHT, Plainfield, Liv. Co., Mich.

FARM FOR SALE

IN A GOOD LOCATION FOR BEES.

I offer for sale, cheap, my farm of 40 acres, 1¼ miles from flourishing village and R. R. station. Frame house, with good cellar, well, etc. Price $1600; $600 may remain on time if desired, at 7 per cent. Other particulars by mail. **E. HUNT,**
6d SHERIDAN, MONTCALM CO., MICH.

WISHING to engage in other business in the fall, I have sold my apiary, and desire a position in an apiary during the summer. Would be willing to instruct a beginner. Ten colonies, 300 L. combs and hives; 20 nucleus hives, cheap.
6d 75 Bagg Street. A. B. WEED, Detroit, Mich.

FOR SALE.—A good 3 horse power Boiler and Engine, in good running order, for sale cheap. Correspondence solicited. Address
6d O. H. TOWNSEND, Kalamazoo, Mich.

Holy-Land Queens.

Untested, this month, single queen, $1.00; six, $5.50; twelve, $10.00. Warranted, 25 cts. more each. No tested queens this month. Bees, $1 00 per lb. For $1.00 extra with order for queen I will send Cook's Manual of the Apiary, late edition, cloth, or the A B C in Bee Culture. **I. R. GOOD,**
TULLAHOMA, COFFEE CO., TENN.
Late of Nappanee, Ind.

THOSE WHO WANT HYBRID OR BLACK QUEENS, TAKE NOTICE.

We have bought a large number of hybrid and black colonies of bees, which have fine queens in, that we will sell at 50 cts. for black, and 75 for hybrid queens. For my advertisement of Albinos, Italians, etc., refer to the April and May number of GLEANINGS.
6d **S. VALENTINE & SON, HAGERSTOWN, MD.**

KEPT IN STOCK.

BASSWOOD HONEY.

It is not possible in all cases to have the contents of each package entirely from the blossoms named, yet sufficiently so to give distinctly their characteristic flavor.

This honey will candy as soon as cold weather begins, and is, in fact, the best proof of its purity. To restore it to the liquid form, set it in a warm oven, or on the reservoir of the stove, removing the cover so it will not ooze out. When it is all melted, remove and cover again. Some liquify it by placing the receptacle in hot water, supported on a thin strip of wood.

NO. 20.

These labels are printed on glazed paper, assorted colors, and trimmed to border. They are kept in stock with the sources White Clover, Mountain Sage, Basswood, and Autumn. Price, 100, 15c.; 1000, $1.00. In ordering, simply give the No., source desired, and quantity wanted. **A. I. ROOT, Medina, O.**

ITALIAN BEES.

During June Queens reared by E. M. Hayhurst, $1.50; reared by myself, $1.00. Full colonies, $7.00. Bees by the pound, $1.00. E. A. GASTMAN,
6 Decatur, Macon Co., Ill.

ESTABLISHED 1855.

BEES WAX

HEADQUARTERS

We have constantly on hand a large stock of Domestic and Imported beeswax in original shape, which we offer to manufacturers of Comb Foundation at lowest prices. Write to us for prices. Address
R. ECKERMANN & WILL,
Beeswax Bleachers & Refiners, SYRACUSE, N. Y.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

New York.—*Honey.*—We take pleasure in quoting honey the same as last issue. *Beeswax* is becoming more plentiful in our market. Prime yellow sells at 37½ @ 38½ c.

We will offer prizes to bee-keepers the coming season, to the one who gets his honey up in the most marketable shape. Circulars for same are in press, and we expect them this afternoon, at which time we will be ready to send out copies.

H. K. & F. B. Thurber & Co.

New York, May 23, 1883.

Cleveland.—*Honey.*—There is a very moderate demand for 1-lb. sections of best white honey at 18 to 19 cts.; 2 lbs. are dull at 17. Extracted, no sale.

Beeswax, none offering; nominally, 40 to 50 cts. per pound. A. C. Kendel.

Cleveland, O., May 23, 1883.

Chicago.—*Honey.*—The demand for comb honey is almost nominal. Prices are very irregular; 10 to 16 cts., according to style and quality; extracted, 8 to 9 cts., according to quality. Some lots of fine white clover, 10 cts.

Beeswax, 38 to 43 cents. R. A. Burnett.

Chicago, May 22, 1883.

Cincinnati.—*Honey.*—The market for extracted honey is lively. Demand exceeds the arrivals by far. Our stock is small, and we are always in danger of having sold out. We pay 7@10 cts. for good honey on arrival. The latter price for choice clover. Price of comb honey is nominal, with a slow demand.

Beeswax.—Arrivals of beeswax are plentiful. We pay 35 cts. for a good article on arrival.

Cincinnati, O., May 22, 1883. Chas. F. Muth.

Detroit.—*Honey.*—The honey market is very dull. A good quality of comb honey brings about 15 cts. Nothing else will sell. *Beeswax* scarce at 35c.

Detroit, Mich., May 24, 1883. A. B. Weed.

Do you buy honey? If so, I have about 1000 lbs. extracted clover, and basswood; would like to sell all in 200-lb. kegs. What can you pay for it?

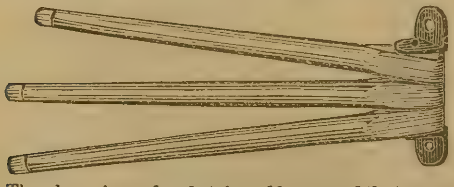
C. A. Hatch.

Ithaca, Richland Co., Wis., Apr. 7, 1883.

I have two barrels, and a half-barrel of heart's-ease honey that I will put on board cars for 8½ c. per lb., no charge for barrels. J. A. Green.

Dayton, Ill., May 10, 1883.

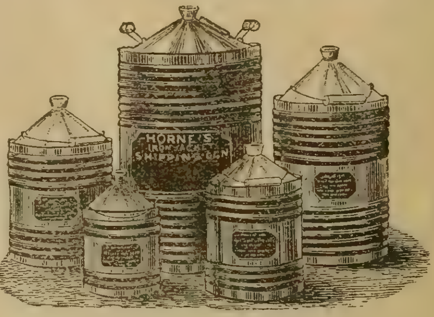
Clothes-Bars, or Towel-Rack.



The above is made of strips of basswood that come from our section machinery, and this is why we can furnish them at such a low figure. The ends of the bars are tipped with a neat nickel-plated ferule; and when screwed up against the wall it is a strong and neat piece of furniture. Price 15 cents; 10 for $1.25, or 100 for $11.00. By mail, 10 cts. each extra.

A. I. ROOT, Medina, O.

SHIPPING-CANS For HONEY.



"Iron-Jacket" Honey-Cans.

I presume the friends are aware that ordinary tin cans are not very safe for shipping full of honey, unless boxed or crated. The cans above are ready to be shipped anywhere.

PRICES.

1	Gallon,	$0.25 each.
2	"	.38 "
3	"	.47 "
5	"	.68 "
10	"	1.10 "

By figuring 11 lbs. of honey to the gallon, you can easily see how many pounds each can holds. They are made from tin plates. A sheet-iron casing, with wood bottom, protects them from bruising. The iron jacket is stronger than wood, and far more serviceable. They neither shrink nor swell, and do not split nor fall apart. Every can is tested by steam and guaranteed to be tight.

A. I. ROOT, Medina, O.

1883. ITALIAN QUEENS! 1883.

Still they go! Bees for business now ready to ship. Send for our new circular of Queens, Full Colonies, and Nuclei. It tells how to introduce queens.

6d T. S. HALL, Kirby's Creek, Jackson Co., Ala.

FIELD PEAS THAT BEAR HONEY!

Our readers have doubtless noticed the many reports we have had of honey from peas during the past year or two. We have just received a large lot of them for seed, from friend Burrows, of Lynnville, Tenn., who writes in regard to them as follows: "These stock peas, so celebrated for honey, should be planted in June, and will make a continuous flow of honey from August to frost, and a heavy crop of peas." Price $1.75 per bushel; $1.00 for half a bushel; 60 cts. per peck, packages included. By mail, postpaid, 20 cts. per pint.

A. I. ROOT, Medina, O.

CANDY for CHILDREN.

MAPLE SUGAR vs. CONFECTIONERY.

Children always want candy, and somebody has said that children always ought to have candy, or some equivalent. While in Cincinnati last fall, friend Muth said that he doubted whether any pure candy could be found in the city; that is, candy made of pure cane sugar. Well, maple sugar bought of our home farmers, we know is pure, and we have this season purchased more than a ton, made by the farmers directly into little cakes. By taking more pains than they have ever done before, they have given us little cakes of a creamy whiteness and delicacy of flavor that seem to me far in advance of any confectionery that was ever made in any of the cities. To keep these little cakes nice, and preserve the flavor, we have had our girls wrap them in tissue paper just as fast as they were brought in from the sugar-camps. We sell them for 3 cents each, 25 cts. for a package of 10, or $2.00 for a basket of 100. If you want a sample of what can be done in the way of nice maple sugar, just send us two 3-cent stamps, and we will mail you a sample cake.

A. I. ROOT, Medina, Ohio.

GLEANINGS
IN
BEE CULTURE.
DEVOTED·TO·BEES·HONEY·&·HOME·INTERESTS.
F.A. Whiting

Vol. XI. JUNE 1, 1883. No. 6.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

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Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18c per year extra. To all countries NOT of the U. P. U., 42c per year extra.

NOTES FROM THE BANNER APIARY.

No. 43.

FROM 60 TO 16.

I REMEMBER that one of my former articles was headed, "From 3 to 30," and I thought the above would be an appropriate title for an article at the present time. You will remember that I told you last month that I had 29 colonies, the most of them in pretty fair condition, and so I did; and, as the weather was warm, they started out well. Even the weakest had sealed brood in two frames, and unsealed brood in two more combs; and considering that I had lost more than one-half of my bees, I felt quite jubilant. One morning I went out of doors and found the mercury down to about 28°. Of course, the bees had all crawled into the center, and rolled themselves up into a ball, and some of these "balls" were not so large as your double fist. All of the brood outside of the cluster was, of course, killed; not only that, but the cold seemed to be the "last straw that broke the camel's back" with the old bees, whose health had been broken down with dysentery during the winter. Each day added a new layer to the dead bees upon the bottom-board, and the cluster of bees grew "smaller by degrees and beautifully less," until only a mere handful remained. Sometimes I took out the queens and used them in filling orders, and united 3 or 4 clusters into one. The bees didn't quarrel; but in a few days there would be only a handful left. I believe this is what is called spring dwindling, and I also *believe* it is the result of imperfect wintering. There may be a goodly number of bees in the hive, and, to all appearances, they may be healthy; but the dysentery from which they have suffered has so weakened them that they can bear neither cold nor hardships. Oh what a comfort it was to take a peep into those colonies that had been fed granulated sugar! sealed brood in five combs, and the hive crammed full of bees. The cold seemed to have no effect upon *them:* there were so many bees that they could resist the cold. Well, I have stored away the combs inside the depopulated hives; have bought a few more of friend Robertson, of Pewamo, and shall commence the season with about 25 colonies, the same as I had last season.

I received the JUVENILE last evening, and, when reading of the rush and hurry and amount of business that your mind had to deal with and manage, I could not help comparing it with my own quiet life. During the rainy days that we have had, brother and I have been working in the shop, putting together those nice white sections that friend Heddon furnishes, making cases to hold them, making hives, and doing our sawing with that home-made buzz-saw. And what comfort we are taking, friend Root! I sometimes find it a little difficult to "make both ends meet," yet I am satisfied with myself and my surroundings, and am perfectly contented. There is a very comforting thought for you, friend R., and that is, you are giving employment to and helping others. Oh, yes! there is one more thing that I wish to mention, and that is, brother and I have, I believe, got every thing here at home that we shall need in the apiary this season; at least, there is nothing that we shall have to "send off" after, and we are all ready for business, just as soon as business is ready for us. Perhaps this is one reason why we are "taking comfort." Well, here I am taking up valuable space in GLEANINGS, without, I fear, imparting much information; so, after saying that that little piece of phonography in the JUVENILE is very neat, I will close. W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., May 19, 1883.

P. S. — Phew! Here is May 21st, and the snow is flying, and the mercury is down to 32°. I was out among the bees this morning at 4:30, but the combs seemed to be so well covered with bees that I don't *think* that much if any brood will be chilled; but I just do wonder when the warm weather is coming to stay. W. Z. H.

But there is a very good moral to your paper this month, friend H., and that is, the comfort of having every thing ready for business as soon as business is ready for you, as you express it. At least, you think you have every thing ready; but with such a boom with your 25 colonies of bees as our friends sometimes have, you may find yourself suddenly short, after all. Another good point you make is the wisdom of being contented with your surroundings. I don't mean contented in any sense that would lead you to lead a lazy life, but accepting the circumstances and your surroundings. I suppose this same spirit, if followed a little further, would make us contented with 32 degrees, and frost and snow, even after the middle of May. Not very *contented*, perhaps, but master of the state of affairs, and ready to make a good season's work notwithstanding. Eh?

P. S.—Now, friend H., I think I want to add a postscript, as you did. I am glad to hear you come right out and say, "From 60 to 16." When a man is beaten, and beaten unexpectedly, I do like to hear him come out squarely, and own up. You see, it helps our A B C class to know what they may expect, and to remember that bee culture is not roses without the attendant thorns.

RUNAWAY SWARMS, AND OTHER MATTERS.

HONEY FROM WILLOWS.

OUR bees have had two days at willow bloom. We have lots of willow hedge here. The sixth and seventh of May were nearly equal to two days in basswood, judging from the flight of the bees, as they flew from 6 A.M. to 7 P.M. so heavily laden, they would sometimes fall in front of the hive, and rest before crawling in.

DISTANCE BEES FLY.

But my bees are the far fliers. I have been satisfied for years that bees will fly 8 miles when honey is scarce nearer. As further evidence, B. F. Little, of Brush Creek, is the only bee-keeper near us having the Italians. Now, his apiary is poorly shaded, and he lost heavily by runaways. These absconding Italians have been found in trees, etc., by bee-hunters, over ten miles from Brush Creek. I have made some inquiry of several bee-hunters. Four swarms of Italian bees have been found in the timber near Fayette, ten miles from Brush Creek, all new swarms; no bees winter here in hollow trees, only during light winters.

The past winter was very severe on bees. Some bee-keepers have lost all; others, half. Three of the largest bee-keepers in our county came out with but a light loss—not over ten per cent. We have an old box-hive bee-keeper in Fayette who has been successfully keeping bees, and made money at it too; he likes to read GLEANINGS, but says he knows all there is worth knowing. I think he could tell us bee-keepers a great many things, if he could be induced to write. He says he never lost a new swarm by absconding, and I think he said one never came out of the hive he put them in. He has had at one time as high as 300 swarms.

IMPORTANCE OF SHADING NEW SWARMS.

His strongest point regarding absconding swarms is good, perfect *shade*, and plenty of *air*. He raises all new swarms nearly one inch off the bottom-board. The sun does not shine on his new swarms. He set his shade trees here and there nearly 20 years ago, and they are quite large. No small shrubbery is near the bees. Trees are well trimmed. It is cool and airy at all times.

I used to lose from two to ten per year that would abscond to the timber; but by giving more air and better shade, not one swarm has left a hive in three years; and last year we had 38 first swarms, and nearly twice that number of after-swarms.

FRED TIMMERMAN.

Fayette, Fayette Co., Iowa, May, 1883.

I am very glad to get your report of honey from the willow, friend T. I have many times wondered why our willow hedges could not be utilized in a way to make them a valuable adjunct to our honey resources. We have willow hedges here, but they don't seem to be the honey-bearing kind. In regard to the distance bees fly, I think a distinction should be made between bees going in search of stores, and the flight of a new swarm, as a swarm of bees with their queen would probably go much further than bees would ordinarily go in quest of stores. I can hardly agree with you, that bees *never* winter in the timber in any locality. We have had so many reports of occasional colonies wintering with very poor protection against the weather, that I should be inclined to think that they sometimes, at least, wintered in trees, even during the severest weather. I am also inclined to think that a colony of Italians will locate in a tree, and send out swarms very often the first season. Bear in mind, we have a good many reports now of first swarms sending out a good many swarms during the first season, and in this way Italian blood would travel a good way, even in one season. Your remarks on shade are good. Many swarms leave their hives, without any question, simply because they are too warm. In putting up bees in our wire-cloth cages, we have ample evidence of the importance of shade and plenty of air. A few days ago our apiarist put a pound and a half of bees in a cage intended for one pound. As the day was cool, he thought there would be no trouble; but the mass of bees, filled with honey, soon raised the temperature to such a pitch that they would all have died, perhaps, in ten minutes, if left under the full rays of the sun. We hung them up in a shady doorway where a strong breeze was passing through, and the temperature was soon down to the normal condition of a cluster of bees. Had a new swarm been in this predicament, they would assuredly have decamped, simply because they must do so to save their lives. Please remember, friends, in handling swarms during hot weather, when they are full of honey, to give them a great abundance of air, and keep them out of the sun.

DOES A SWARM EVER GO OFF WITHOUT CLUSTERING?

AND SOME OTHER MATTERS AS WELL.

I SEE in your May issue that Mr. Fogy seems to advance the idea, that a swarm never issues and goes for parts unknown without first clustering, or settling, as we may choose to call it. I must say that his experience in the swarming line does not correspond with mine, for I can at this moment call to mind at least three swarms which issued from the parent hive, and started for forest homes, and that without clustering. Probably Mr. Fogy would say that I might not have seen them issue; but I did, for I was on hand at the time. One of the swarms, I succeeded in capturing after I had given about a half-mile chase; the other two made their escape to their chosen home, for aught I know.

LARGE ENTRANCES GIVEN AGAIN AS THE CAUSE.

I have noticed, in my experience in swarming, that those colonies with large entrances are the ones which occasionally play such tricks. I think it unnecessary to make any big hurrah, or beat drums, tin pans, etc., for they will settle just as readily without the noise. I will give you my method for settling swarms when they are not inclined to settle readily, and you can take it for what it is worth.

SETTLING THEM WITH A LOOKING-GLASS.

When I have a swarm of bees, and they have no disposition to settle, I get a looking-glass, if it is to be had, and hold it in the rays of the sun so that the reflection caused by the sun shining on the glass can be thrown among the swarm. The reflection should be kept wavering among them until they are so dazzled that they will alight on the first thing that comes in their way. If the sun is not shining brightly, the glass will be of no service. This may be old to most bee-keepers, but will prove a success if executed properly.

DO FIRST SWARMS EVER ISSUE WITH MORE THAN ONE QUEEN?

In 1879 I had a swarm issue from the old stock, accompanied by two queens. I supposed that it was the old queen and daughter. On the day of issuing I hived them, and in doing so I caught a queen and clipped her wing. The next day the same swarm came out again, this time accompanied by a new queen with a good wing. I forgot to state, in the commencement, that this was a first swarm.

DO BEES CHANGE EGGS FROM ONE FRAME TO ANOTHER, TO REAR QUEENS?

In the fall of 1882 I had a case where eggs were changed from one frame to another, to raise queens. The colony had previously become queenless, and no brood was in the hive, until a frame of brood, or eggs, rather, was given from a choice queen, and in four or five days there were queen-cells with larvæ on some two or three different frames within this hive, all formed by those bees.

THE DRONE THEORY, AGAIN.

I have had two different cases in which drones were reared from worker brood or eggs. I know some will be ready to take exceptions to this; but then, it should be in a friendly way, while we are aware that necessity alters cases. In August, 1882, in the latter part of the month, a queenless colony was given a frame of brood from which to rear a queen. There was no drone comb on the frame, but yet they capped a part of it as worker and the rest as drone, except the royal cells. I took notice of them at the time of hatching, and a part of those cells which were capped as drone brood hatched out worker progeny, and the remainder the opposite. And again in April, 1883, I had a case of worker eggs changed to drone; but this time every cell that was enlarged, proved, on examination at time of hatching, to be occupied by a drone. In neither of those cases was there any brood which was left in the native hive treated in like manner; so in my experience in bee culture I can not help thinking that the worker bees have the power of changing the germ of the worker eggs to that of a drone.

HONEY FROM BUCKEYE.

Bees are booming at the present. They are rearing brood in abundance, and there is quite a flow of honey at the present time. They are getting the most of it from the buckeye bloom. It has a peculiar flavor, but I like the quality of the honey.

Jordan, Ind., May 19, 1883. A. L. LINDLEY.

ARE WE SURE THAT STRONG COLONIES ARE KILLED BY EXPOSURE?

WHERE DOES THE TRUTH LIE?

TO show that bees will endure long-continued, intense cold below zero, night after night, for a considerable period of time, I will relate the following: I found one colony in my apiary in March, after the snow was gone (as I did not look at them during winter, nor, indeed, since the honey was taken off, about the 10th of Sept., for I then fixed them for winter), in a Simplicity hive with nothing above the frames but a half-story and cover (with the usual number of knot-holes in the cover, *as you make them*). This was one of your make, and had one hole ½ inch in diameter, in and out of which the bees flew when it was warm enough, and probably out, *sometimes*, when it was not. The half-story I made myself, and it was not made to fit the cover; but the top of the sides and ends was left flat, just as the saw left them, and consequently the cover did fit very well; and the lower story, also, was of my make, and the joint just as flat as the saw left it. The only part you made was the cover and 10 frames.

When I opened it I was much surprised to find it in that shape, and to find it full of bees, and in fine condition, with plenty of brood for that season of the year, but with their honey nearly all gone, which shows that their exposed condition had caused them to consume an unusual amount, as it had 10 frames, which undoubtedly were well filled in the fall, while others with only 8 frames were pretty well supplied with sealed honey on March first, which, on looking, I find to be the date of the examination. I at once procured a box containing about 8 lbs. of honey, it having one comb broken out of center, and placed it on the frames, and then covered them with a quilt, and made them as snug as possible in that way; and to show how vigorous they were they at once went to work and built a new comb in the new place of the broken one, and this *in March.* I did not look for the queen in particular at this time; but soon they began to dwindle, and two weeks ago I saw that there was not so much brood as there had been. I looked for the queen, but did not find her; but instead I found two queen-cells near the center of the hive, and last week I found a young queen, and the bees reduced to a double handful. When I first found them destitute of a mother, I sent to you for a dollar queen, but she has not arrived yet. It is doubtful whether I can save them. There are still young bees hatching, so that it can not be very long since she disappeared. Was it the exposed condition in winter, or the careful nursing in spring, that caused the loss? I am sorry, for I thought I had proved something. J. F. Temple.

Ridgeway, Lenawee Co., Mich., May 21, 1883.

REPORT FROM O. O. POPPLETON.

IMPORTANCE OF WINDBREAKS IN WINTER.

I REACHED home two weeks ago, from an absence of about six months in the South, and found my bees had wintered very poorly; that the losses in my apiary were more the past winter than the aggregate of all losses for the previous 9 or 10 winters. Out of 151 colonies last fall, I now have about 75 good ones, and some 10 or 15 fair and poor ones, making a loss of about 40%. All were in chaff hives. As we sometimes learn our best lessons from our failures, I will give what I find, after thorough investigation, to be the circumstances which seem to have caused my loss. Of course, I have depended a good deal on what my assistant tells me, who has charge of the bees during my absence.

I find the winter has been the coldest and steadiest that Northern Iowa has experienced for nearly 20 years past, and that at one time the thermometer was near and below zero for about six weeks continuously. My assistant informs me that the snow entirely covered the hives in some parts of the apiary, while in other parts the ground was swept almost entirely bare, and that the bees that were covered with the snow are nearly all alive, and doing well, while those that were not so covered are mostly dead. He also says that some of the dead colonies showed signs of dysentery; but the most of them were dry and clean, both bees, hives, and packing, which statement is fully confirmed by my own investigation of hives since coming home. I also find more queenless colonies than usual.

Last spring I grubbed out a patch of brush and small timber that partly protected the north-east corner of the apiary, and I find that nearly every colony in that corner is dead, and that fully three-fourths of all the dead colonies are in the east half. I also find that my neighbors who winter on a similar plan to my own have succeeded the same as usual, the only serious loss that I have heard of in chaff hives being my own.

It seems to me that the foregoing facts leave but little opportunity for a difference of opinion as to what were the prime causes of this heavy loss — the long-continued spell of very cold weather, which it was utterly out of our power to prevent, in connection with the fact of a part of the apiary being left fully exposed to our prairie "blizzards," which last I could and ought to have prevented. I am fully satisfied, that if I had surrounded the exposed corner of my yard with a high tight board fence, that the loss of bees would have been insignificant, and I have already made arrangements for the growth of an evergreen hedge around the exposed part.

A young friend who lives on the open prairie has never succeeded in wintering his bees during hard winters, although I knew from actual examination that they were properly packed. The reason why he alone was unsuccessful has heretofore puzzled me; but this winter's experience explains it all.

I think some lessons can be learned from this loss, the most important one being that, to secure success in outdoor, or, in fact, any other method of wintering, we must attend to every detail that experience teaches us is a help; not alone to the more essential details, but to every detail that is a help; also that bees must have the aid of some kind of surroundings that will break off the full force of our vigorous winter winds.

A few other facts I have noticed. Some 40 or 50 of my queens were bred in the South; but I can discover no difference in their wintering qualities, compared with Northern-bred queens. Hives that are protected on bottom as well as sides and top, have come through dryer than those having unprotected bottoms; but I do not see that they have wintered their bees much better. I do not feel that the plan of chaff-hive wintering is at all in fault for this loss of mine, but it was caused by an inexcusable blunder of my own in removing one of the means of protection against high winds, without replacing it with something else equally efficient.

O. O. Poppleton.

Williamstown, Iowa, May 17, 1883.

BEE CULTURE FOR STUDENTS.

FROM 1 TO 3, AND 190 LBS. OF HONEY.

I BEGAN bee-keeping last spring with one swarm of hybrids. They gave 190 lbs. of honey, and multiplied to three strong colonies. October 1st I packed them in chaff in dry-goods boxes. The entrances were left open, and provision made for upward ventilation. Two are now in fine condition, and still in the boxes. The other swarm, near spring, crowded into a corner, and, as I think, starved. How can this be prevented?

I am a young man intending to go to college as soon as I get the means. Do you think bee-keeping could be made a help while pursuing the course?

Lyle, Minn., May 12, 1883. Fred Clow.

I do think, friend Fred, that bee-keeping is one of the best things in the world for a young man intending to go through college. Very many of our most successful boys in bee culture are college boys. Mr. House is one of them, but he has gone home to work with his bees this summer, and will resume his studies in the medical college in Chicago in the fall. When through, he is going as a missionary physician to Africa. Not only will college students succeed better, other things being equal, but the outdoor work that the bees require is just the best thing in the world for students to keep up their physical health. May God's blessing rest on the bee-keeping students of our land!

A FAMOUS HONEY-PLANT.

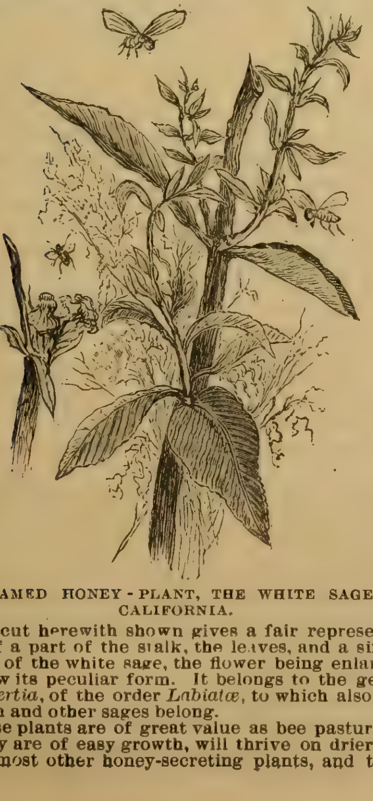
THE CALIFORNIA SAGES.

I NOTICE in this month's GLEANINGS that one of your California correspondents takes exception to the many strange names that have been given to the white sage. He should have also added that it has been unfaithfully illustrated in "Cook's Manual," the A B C, and in the *B. K. Magazine*. I send you a copy of the *Pacific Rural Press*, which has the only true representation of the leaves and flowers of this plant. 'Tis true, it might have been better; but when it is known that it was taken from flowers picked in my garden in December, it can be seen how fine a plant it may be made.

N. Temescal, Cal., April 7, 1883. W. A. PRYAL.

Not only is California famous for its specimens of vegetable growth of huge proportions, but also for some of much less imposing appearances. Among the latter there is no plant that has made this State more renowned than has the white or honey sage of Southern California. Hardly ten years ago it was looked upon as a useless shrub, scarcely fit for sheep to browse upon. Since then the honey-bee has made it famous. When it became known that honey flowed from the flowers of this plant, as it was never known to do even in old Greece, and of a quality far superior, thousands of colonies of bees were located in the sage region. During our favorable years these bees gathered the honey from the flowers about them in such large quantities that many an ocean craft was weighted down with the nectar.

To all parts of the world has this delicious article been sent, and everywhere it has secured for the place from whence it came, praises that no other honey-land ever received. Besides the good words this State has obtained by its excellent honey, the people have received thousands of dollars which would never have entered the State if the nectar were wasted on the desert air, or if the plant in question did not exist in our midst.



THE FAMED HONEY-PLANT, THE WHITE SAGE OF CALIFORNIA.

The cut herewith shown gives a fair representation of a part of the stalk, the leaves, and a single flower of the white sage, the flower being enlarged to show its peculiar form. It belongs to the genus *Audibertia*, of the order *Labiatœ*, to which also the garden and other sages belong.

These plants are of great value as bee pasturage, as they are of easy growth, will thrive on drier soil than most other honey-secreting plants, and their season of efflorescence continues many weeks. The writer has cultivated the white sage in Alameda County, near Berkeley, and as a result he finds that it thrives remarkably, growing luxuriously on cultivated soil, and producing an abundance of bloom. It is a plant of which every apiarist should disseminate the seeds as much as possible, so that in the course of a few years large patches of the plants may be found in the hills and valleys in various parts of the State. By doing this, such a thing as a short honey crop will hardly ever be known.

The Rev. J. C. Nevin, of Los Angeles County, in writing of the sages lately, says: "There are at least half a dozen species of *Audibertia* on the coast, included under the popular names of 'white' and 'black' sage. The 'white' (*Audibertia polystachya*) differs very much in the form of inflorescence from all the others, and from that of the genuine sage. Its whole appearance makes it a rather striking plant, and, when once known, to be easily recognized anywhere. Its range extends from Santa Barbara to San Diego. All lovers of the beautiful white honey gathered from its flowers ought to know and regard it with feelings of gratitude.

"'Ball,' 'button,' or 'black' sage, is undoubtedly a common name for several distinct species. Their general habit is much the same, whilst ordinarily the specific distinctions may not be so obvious. The whole appearance is more nearly like the true sage than is the 'white,' above mentioned. Of the number, *A. stachyoides*, *A. Palmeri*, and *A. Clevelandi* are very closely allied and most difficult to distinguish. *A. stachyoides* ranges from the Contra Costa Mountains southward, while *A. Palmeri* and *A. Clevelandi* are confined to the southern part of the State. Just what precise form prevails around Los Angeles has not as yet been definitely settled; but it is mostly near to, if not identical with, *A. Palmeri*, the typical form of which is found in San Diego County."—*Pacific Rural Press*, Jan. 13, 1883.

* * *

CAN BEES FLY NINETY MILES AN HOUR?

SOMETHING FURTHER ON THE SUBJECT.

ONE of the most dangerous sources of fallacy is arguing in regard to matters concerning which our knowledge is incomplete. In the May No. of GLEANINGS, Mr. Shuck takes Mr. Doolittle severely to task for asserting that his bees can fly ninety miles per hour. Mr. Shuck doubts this statement, because a wind blowing ninety miles an hour would blow Doolittle's hives out of his yard like so much chaff. Granting the latter assertion (which, however, has not been proved), it does not necessarily follow that bees can not fly ninety miles an hour, for we have other facts equally strong to prove that they can. The wild duck has been known to fly ninety miles an hour — its speed having been measured by the electro-chronograph. The pigeon has been known to exceed ninety miles an hour for short distances. The question now is, Is the power of flight of the bee equal to that of the duck or pigeon?

Many years ago we experimented very carefully on this subject. We found that very few pigeons could carry their own weight in flight. Ducks we could not procure under suitable conditions. Bees easily carried their own weight, and sometimes even 1¾ times their own weight; showing that they were proportionally much stronger in flight than pigeons. And as our method of loading was more clumsy with the bee than with the pigeon, we believe that two to one in power is nearer the mark. If this be so, there can be no *a priori* objection to the speed given by Mr. Doolittle for the bee, if the pigeon can make 90 miles. It will be very difficult to time the bee, on account of the difficulty of seeing it. It might be timed by marking individuals as they fed, and timing them with good watches. Bees with a spot of red, yellow, white, blue, and other marked colors might be timed; but the difficulty would be to get them up to full speed. When just starting, and when nearing home, they fly very slowly, as is easily seen. But a bee slowly making its way to the entrance of the hive has a very different motion from that of one with its anger aroused, and making for its victim. A bee which has just made up its mind to "make an opening" for itself, and flies to its work, goes, we should think, at a rate which can not fall far short of Doolittle's estimate. That very few bees make ninety miles per hour in going from their feeding-grounds, will, we think, be generally conceded. JOHN PHIN.

Cedar Brae, N. J., May 7, 1883.

Now, friend P., I can't agree with you, that it is very dangerous for those to write on a subject whose knowledge is incomplete, as you express it. My knowledge is quite incomplete in the matter; yet on another column I have hazarded the opinion that bees do not ordinarily fly over 10 or 15 miles an hour. Perhaps I am mistaken, and may be I am very badly mistaken; but for all that, I think it is a good thing for us to compare ideas in the matter. You have given us important facts, and so have others; and I feel that some one will, ere long, give us some accurate experiments that will settle the matter about as conclusively as friend March settled the matter in regard to how *far* bees fly.

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REFINING BEESWAX.

SOME VALUABLE HINTS FROM A PRACTICAL WAX-REFINER.

MR. RICHARD MERKLE, of St. Louis, Mo., has kindly given to the bee-folks the following valuable facts in regard to cleansing and purifying the wax of commerce. We feel the more grateful to him, because it is so unusual for practical workmen in any branch of trade like this to communicate so thoroughly and so willingly the secrets of the trade, as it were:—

Yours of the 27th ult. is at hand. To refine, say 200 or 300 lbs., take an empty oil-barrel open on one end as a stand, and a half-inch copper steam-pipe, to reach within an inch of the bottom, is the apparatus. Set your stand in place; screw on the steam-pipe; pour on one or two buckets of water, enough to bring the mouth of the pipe into the water, and put in about ½ lb. of sulphuric acid, enough to acidify the water. Now let on steam, and fill up with wax. Let it on freely till melted, and the molten wax is thrown up with foam, to bring it to boiling, or 212°. Then unscrew the pipe and let the wax rest till perfectly settled and cooled off — say 3 hours; dip out slowly till you come down to the sediment and water, and let this cool off till next day, and take out what is left, for next melting. The sulphuric acid is what will cause the wax to settle well; but if you have dark black wax, which you may refine by itself, then after going through the operation as above, while the steam is yet on, and the wax well agitated, a few drops more of sulphuric acid, and the color will change immediately. A little practice will tell you how much acid is needed. In putting acid into the boiling wax, the mass becomes rather thick and milky, and if not liked it may be dipped over into another stand, which also must have the acidified water, as if commencing.

I think I have made the explanation so that you will easily understand it; sulphuric acid before melting, if only to make a clear melting, boiling, or 212° heat, and settling for several hours.

St. Louis, Mo., May 4, 1883. RICHARD MERKLE.

Our friends will observe that the above plan is not very much different from the one we have adopted for cleansing wax and rendering combs, only that friend Merkle uses sulphuric acid, while we use none. I would suggest that the process be performed out of doors, for the slop and spatter attending it is not very pleasant inside of a building. In melting wax as we do, by steam-pipes, the impurities settle on the pipes and the bottom of the cans. These are taken out and put into a hogshead; and when this hogshead is filled we put them through the same refining process as described above, and therefore get quite a quantity of dark wax, which we use, as you may have noticed, for making the second grade of fdn., to be used only in the brood-combs. We will make a test of sulphuric acid, and report when next we have some to render over.

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A GOOD REPORT FROM CANADA.

AFTER all, there was no reason for the beginner to have been nervous, as he told you last January. His bees were all in chaff hives, with a kind of Hill device over the frames, a quilt, then a chaff cushion, and two inches of sawdust. Bees crowded on six or seven frames, with two division-boards, and empty space filled with buckwheat chaff. The winter was very cold, frequently 20° below zero, and snow drifted six or seven feet over the hives. Bees are all right now; plenty of honey to last till fruit-bloom; they are carrying in pollen, and lots of brood; they have not had more than a dollar's worth of food since this time last year. You ought to see them swarming around the crocuses and snowdrops, which bloomed almost as soon as the snow was off.

FROM 2 TO 7, AND 220 LBS. OF HONEY.

I got seven colonies out of two, besides one in the woods, and 220 lbs. of honey. Not so bad for a poor year; and all wintered safely — that's the best of it. There appears to have been considerable loss among apiarists hereabout. The old-fashioned box-hive men have mostly empty boxes of combs, as the result of not being up with the times.

Prospects are excellent for this season. Clover was protected by the deep snow, and not killed by the frost, as often happens.

WHY DOES A GOOD QUEEN LAY SEVERAL EGGS IN A CELL?

What is the reason a young queen, hatched last July, lays two or three eggs in a cell? She has quit such foolishness now, and settled down to straight business.

HOW TO USE FOUNDATION.

How would you advise, so as to use a small supply of fdn. to the best advantage? It is high and scarce here, as elsewhere. I shall run principally for extracted honey. C. W. YOUNG.

Stratford, Ont., Can., Apr. 19, 1883.

Your young queen laid several eggs in a cell because the cluster of bees with her was too small to prepare as many cells as she was capable of filling. I presume she was energetic, and didn't want to be idle, so she went around the second or third time after she had filled all of her cells. When young bees are hatched out so as to make her retinue larger, of course she had no need of so doing, and "stopped such foolishness," as you term it.—I would use a small quantity of fdn., by cutting in strips and using it for starters. The larger the starters, the more time you will save the bees.

Bee Botany,

OR HONEY-PLANTS TO BE NAMED.

WASN'T IT A MISTAKE?

In last Gleanings, Fr. Holtke, p. 123, speaks of *Poinciana pulcherrima* (pulcherrima means beautiful), a leguminous plant closely related to partridge pea, and really describes the beautiful poinsettia of our greenhouses (*Euphorbia pulcherrima*) which belongs to the *Euphorbiacæ* family. Poinsettia is very showy, and each flower has a large yellow gland which is cup-shaped, and always full of nectar. This plant is a native of Mexico. I have often thought that its habitat must be the paradise of the bees and apiarist. A. J. Cook.

Lansing, Mich., Mar. 8, 1883.

Many thanks, friend Cook, for the valuable information you give us in this matter; but are you not afraid so many great hard words in just one little short letter may discourage some of our younger ones, to say nothing of the rest? The mistake was ours, not friend Holtke's, as explained in our last issue.

THAT HONEY-BEARING HONEYSUCKLE.

I send you the bloom of that honeysuckle, and will mail you by this post a plant of the same. You will observe by the bloom that it forms bunches, and these bloom out in succession, keeping the plant covered for about 4 weeks. It was covered with snow about 3 weeks ago, but it did not hurt the bloom. As soon as it melted, the bees covered it. Perhaps it may be a good spring bee-feeder.

F. L. Washington.

Nashville, Tenn., April 4, 1883.

Answer, by Prof. Lazenby:—

The plant from F. L. Washington, Nashville, Tenn., was received in bad condition for identification. All of the flowers were broken off, making it very difficult to name the plant with any degree of certainty. I judge it to be a species of *Diervilla*, or "Bush Honeysuckle," belonging to the Caprifoliaceæ, or Honeysuckle family. It is probably *Diervilla tripida*. It is a shrubby plant, not uncommon in hedges and thickets, and receives its generic name from Dierville, a French surgeon, and the discoverer of the original species. Although the species mentioned above is not as fragrant as some species of the *honicera*, it is much frequented by hummingbirds and insects, and probably contains much nectar. The speciman was so badly broken that there is nothing left worth returning. William R. Lazenby.

Columbus, O., April 17, 1883.

VETCHES FOR BEES.

I send by mail some specimens of vetch, which flourish well in this country, and are fine for bees. Please have it analyzed for me. Can you tell me where I can get the seed in quantity? I can not get it here. W. S. Logan.

Keatchie, De Soto Par., La., April 16, 1883.

The plant is *Vicia sativa, L.*; common vetch, or tare; a plant formerly much cultivated here, and still held in high repute as a fodder plant for cattle in Europe. It was introduced from Europe, and is now generally regarded as a weed in the U. S. The following is a description of the plant. An annual with a simple stem and compound leaves; the leaflets in 5 to 7 opposite pairs, obovate, oblong to linear, mucronate; flowers bluish-purple, mostly in pairs, sessile. Fruit a long, several-seeded pod. The plant trails one to three feet, or climbs by the tendrils on the ends of the pinnate leaves. Leaflets, ¾ to 1½ inches long. Flowers axilary. W. R. Lazenby.

Columbus, O., April 27, 1883.

THE MESQUITE-TREE OF TEXAS.

The mesquite-tree of Texas, one that yields the "mesquite-gum," is the *Prosopis glandulosa*, suborder *Mimoseæ*, order *Leguminosæ*. It grows from 20 to 40 feet high, attaining a diameter of 18 inches. It is said to grow where no other fruit-tree will live.

Columbus, O. Wm. R. Lazenby.

ANOTHER HONEY-BEARING SAGE.

I inclose a sample of plant we call wine, or foliage plant, that the Italians seem to like just now as well as catnip or motherwort in fore part of season.

Marietta, O. Maria L. Deming.

The plant sent to you by Maria L. Deming, Marietta, O., is evidently a species of *Salvia*, a well-known genus of plants belonging to the order *Labiatæ*, or Mint family. It is undoubtedly *Salvia variegata*, which is often grown as an ornamental plant. It is quite readily propagated by seeds or cuttings, and is quite closely allied to the common garden sage. Nearly all of the salvias are handsome flowering plants, some of them being hardy and herbaceous, while others are more tender, and assume a somewhat shrubby character. The name "salvia" is from a Latin word, *salveo*, meaning, to be in health; probably in allusion to the salutary qualities of the sage. Wm. R. Lazenby.

Columbus, O.

WINTERING BEES ON A LARGE SCALE.

SUCCESS UNDER CONDITIONS APPARENTLY OPPOSITE.

As there so are many controversies regarding wintering bees, I think I will give a few facts that have come under my observation in relation to the matter. In the spring of 1882, wishing to purchase some bees, I made a visit to the apiary of Wm. Denison, of Gowan, Mich., who keeps his bees in box hives. He had removed about 200 hives from his cellars a few days previous. He had wintered with trifling loss at that time, although I was informed that he lost nearly one-third afterward during a cold spell, and after the bees had gathered natural pollen. His cellars were built in a very dry, sandy place; the earth in the bottoms was so dry that it was dusty.

I also visited the apiaries of J. H. Robertson, Pewamo, Mich., the same day, who had also just removed his bees from bee cellar or cave. He had some 400 colonies, which were in good shape. His cellar was the reverse of Mr. Denison's, as there was a considerable amount of water in the bottom, and

Mr. R. informed me that he had stored a quantity of ice in one end during the latter part of the winter.

I can give also another instance of bees wintering under opposite conditions. This winter, which has been a very hard one, about the middle of March, I examined some bees owned by a Norwegian, whose only knowledge of bees was that they would sting. Six colonies were placed on shelf in a cellar; the whole cellar bottom was covered with potatoes, there being some 700 bushels of them. He told me that he had one hive he could not get into the cellar, as they stung so badly, and he let them stay out. They were in a two-story hive, with cap on. Where the two stories came together there was a large crack which had been filled with fragments of paper, but hardly served to keep out cold air; and yet the inmates seemed to be in good condition. The colonies in the cellar were very strong.

S. J. YOUNGMAN.

Cato, Montcalm Co., Mich , May 13, 1883.

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ODDS AND ENDS, FROM DOOLITTLE.

PARAFFINE FOR FOUNDATION.

ON page 186, April No. of GLEANINGS, you wish those who experimented with fdn. made from paraffine, and used it in sections several years ago, to speak out and tell how it worked. As I used several pounds of it, and lost several dollars for every pound used, perhaps it might be well to speak of it as a warning to others. At first I placed a few sections on the hives filled with paraffine fdn., to see if the bees would accept of it readily. As they did so, more was put on, and I soon was exultant over the nice white combs, all sparkling with honey. Soon the bees had it nearly all sealed over, and I expected the next time I went over the bee-yard to take off honey, to have a fine lot to come off, as this did look so nice, capped so white and nice from ½ to ⅔ the way down the sections. Just before I was to take it off the hives, there came two days in which the mercury rose from 95° to 97° in the shade; and upon going to the bee-yard I found the bees to these hives having the paraffine fdn. over them, all daubed with honey, and honey running out at the entrance. An examination showed that nearly every section filled with the paraffine fdn. had been ruined, as the fdn. had so sagged that it lay in a mass at the bottom of the box, while those having natural comb in them had not been damaged in the least.

SMALL BROOD-CHAMBERS.

On page 190, same number, J. Woolsey wishes to know how many feet of comb I give my bees when I put on sections. I generally use 9 Gallup frames, the combs in which are about 10x10¾ inches square. This gives about 6⅔ square feet of comb, surface measure. Sometimes I use only 7 or 8, according as I get them filled with brood when the honey-harvest comes on. I desire to have as much brood in each frame as possible, yet there is generally some little honey and pollen in the upper corners of the frames. If I get to the amount of 7 full frames of brood in 9 frames, I call it pretty good. If there is not that amount, I use fewer frames so as to get the first honey put in the sections; for upon this depends our crop of section honey to a large extent.

POLLEN PRODUCING DYSENTERY.

On page 191 I find these words: "Brood-rearing and its attendant consumption of pollen is without question one great cause of dysentery." Now, I wish to ask what is the cause of undue "brood-rearing and its attendant consumption of pollen"? Is it the pollen a hive contains? If so, the more pollen the more fatal the result, would be the natural conclusion. This I do not find to be the case after careful examinations. Now, *candidly*, I do not think that pollen has any thing to do with the first cause of our wintering troubles. I have made careful examinations the past winter to see if I could get any clew to what caused dysentery and loss of bees in winter. As I have lost 11 colonies, and have others mere remnants, I had some chance to experiment. I find that some colonies will keep in a normal condition for 5 months without a flight, while others will not so keep for more than 2 to 3 months. As long as the colony keeps quiet and compactly clustered, they are all right, and I believe some few colonies would so keep on their summer stands, if winter held them inside their hives for 7 months. Now the question comes, If a few will do thus, why not all? What causes a part of our stocks that get the dysentery, and die, to do so? I wish I were able to answer this; but as I am not, I will give an item or two showing that brood-rearing and pollen is not the first cause. Soon after Christmas I observed, upon taking a peep into my colonies, as I often do on mild days, that two had become uneasy, and had broken the cluster. At this time no brood-rearing had commenced, and no pollen been consumed that I could detect. By raising them up at the bottom I succeeded in quieting one of them; but on the other it had no effect. In about two weeks, another mild day occurred, and an examination showed a little brood started in the still uneasy colony, while the other, being quiet, was let down on the bottom-board again. In a week I found that this last was in commotion again, so I raised it up the second time. The other had a large lot of brood, and had begun to consume pollen to feed the larvæ, while the one that seemed to be quieted by raising the bottom-board had no brood, and had used no pollen, that I could detect. To make a long story short, after rearing brood in four frames, and using a large quantity of pollen, the one colony died, while the other is still alive, and a fair colony to-day. In all the 11 that have died, I have observed that the confinement necessarily attending a cold winter causes the abdomen of the bee to become distended with excrement; a desire seizes them to get out; the cluster becomes broken up, after which brood-rearing is started quite extensively, in the vain hope to thus keep their numbers good, by replacing those which are dying daily, till the bees are worn out by this constant restlessness, while those hatching can not battle with the cold, and thus all perish together. If pollen and brood play a part in this matter, it is only a secondary part, in my humble opinion. I still believe confinement in relation to the stores is where the trouble lies. For further reasons why I believe so, see page 76 of GLEANINGS for 1875.

THE COMING BEE.

I was much amused in reading friend Secor's article on page 240, May GLEANINGS, headed as above, for he brought to my mind very vividly similar scenes through which I had passed, setting bees out of the cellar. Now, friend S., unless you wish to amuse your wife in that way again, just set a cover or bottom-board of a hive just outside your cellar door, and upon this set your hive of bees as you come out of the cellar. Have your lighted smoker handy by, and blow a few puffs of smoke under the hive, when you can carry them where you wish, without performing as you did before; for the bees will not attempt to fly out and sting for a minute or two after smoking. Of all the bees to sting, one that leaves its hive on carrying out of the cellar is the worst. As they have no place to go to except to hang around where they left the hive, they will dart at you for an hour after, and every time you pass that way. This applies only to those who use loose bottom-boards; for with a tight bottom-board the bees can be shut in their hives while carrying from the cellar.

SWARMS GOING OFF WITHOUT CLUSTERING.

On page 243 you ask those who have seen first swarms go off, to "stand up and testify." Years ago, when I was about 12 years old, father kept bees, and I was the one to watch for new swarms, calling father from the field to hive them. Just before dinner one day a large first swarm came off, and before they were all fairly out of the hive they began to move off to the north of the house, where there were no trees. Father had just come home for dinner, and seeing them going in that direction he told me to ring the bell louder (our custom then to stop swarms), and he took to beating a pan. Thus we followed them for half a mile, when, tired and out of breath, we gave up the chase, and let them go. I have also had one such attempt since I kept bees; but as the queen's wings were clipped, they came back of course.

DEATH STOPS ALL PLANS.

On page 250 you say, "Set the man whom you could not get the bees to sting, at work among the bees day after day." I would have gladly done so, but death, that destroyer of all living, removed him from our neighborhood shortly after this. As he was nearly 80 years old, and testified to never being stung in his life by a honey-bee, and as I could not get him stung (also knowing that he kept bees for nearly 20 years), I have believed that there was at least one person whom the bees would not sting. I confess to being a little wicked in trying to get him stung, but I was anxious to see if what he said was really so.
G. M. DOOLITTLE.

Borodino, N. Y., May 12, 1883.

But, friend D., you don't say whether you used pure paraffine, or paraffine and wax. My experience has been just about what you give, with pure paraffine, and I gave the result years ago, when I first made the experiments. We have some of the same kind of trouble where the paraffine is part wax, even three parts wax and one of paraffine. But it has been suggested that about the latter proportion would stand the heat, providing it were stayed with wires. The reasons you have given are sufficient, I should think, to deter any one from wanting to make experiments with paraffine for comb honey. Comb honey breaks down fast enough as it is. Within a few days, Ernest has been making some experiments with samples of paraffine sent us to test; but so far, we can find nothing that has the rare property possessed by beeswax, of standing a very high temperature, without melting. Paraffine has two objections: when cold it is more brittle than wax; it also melts at a temperature where wax would have considerable tenacity. Very likely we shall be obliged to hold on to the wax made by the bees, for all time to come.

By the way, it seems to me your experiment in raising the hives up in the cellar demonstrates the advantage of more ventilation; and why will not abundant ventilation keep bees quiet, and stop the dysentery? Very many times in years that have passed, one after another has recommended wintering bees without any bottom to the hive, so that the dead bees could drop clear down out of the way, and then abundance of air might always have access from below. Why has this plan been dropped? Is any one practicing it yet? Of one thing I feel pretty sure, that very many cases of losses out of doors and in cellars would have been saved by a freer circulation of air — hives "cracked from top to bottom," for instance.

PATENT IMPOSITIONS.

SECTIONAL HONEY-BOXES INSIDE A WIDE FRAME.

WHILE the present system of issuing patents is maintained, it is well for the public to be on guard. Patent solicitors make their fees regardless of real merit in a supposed invention; and if the examiners are led to believe that the law is complied with, patents are issued, even on old and obsolete ideas. This has often been done. Applicants are now allowed patents on the most trivial claims; and repeatedly instances have been given where the claims are not only not original, but are known to have been before made, and being unappreciated have dropped out of use.

Now, regarding the claims for the use of the wide frames as patented. It is absurd. I have myself made them longer than the life of a patent. For one, I am willing to contribute to a fund to be used to defend against any such fraudulent claims.
J. W. PORTER.

Charlottesville, Va., May 17, 1883.

I believe you are right, friend P., and the case you have alluded to well illustrates the point. In regard to sections in large frames, friend Baldridge sends us the following:—

SECTIONS IN LARGE FRAMES.

I have read in GLEANINGS for March and May what you and H. H. Flick, and others, have to say about the use of sections *inside of frames*. I have an old scrap-book of items and articles relating to bees, made by me prior to 1860, in which I find many interesting *facts* when peculiar circumstances arise. I will inclose you to-day some illustrations, with accompanying description, taken from the *American Agriculturist* for 1858 or 1859, concerning the use of sections in large frames, and *patented* Nov. 9, 1858, to Ebenezer W. Phelps, of Elizabeth, New Jersey. When I came to Illinois, in 1861, I found here quite a number of Phelps' hives, supplied with sectional frames, in common use. These facts should, therefore, allay any excitement in regard to Mr. Flick's blackmailing threats. The matter preceding the illustrations was taken from an advertisement, as before stated, and the rest from the reading columns of the *Am. Agriculturist*, as follows: —

EXCELSIOR! EXCELSIOR!! HONEY MADE TO ORDER. **Phelps' Sectional Frame and Movable Comb Hive,** Patented Nov. 9, 1858. By means of this novel improvement the honey is taken from the hive in small frames, in separate pieces five inches square (without injury or exposure to the bees), in the most beautiful and convenient form for table or market use.

We do not give the cuts, but copy the description of them, which is as follows:—

Fig. 2 is a side view of one of the frames, A, A, taken out. Inside of this are four smaller frames, E, E, E, E, each one of which is about 5 inches square. Fig. 3 is one of the smaller frames taken out. Fig. 4 shows several smaller frames, E, E, E, E, arranged in a box to be placed in the top of the hive, when desired.

The advantage of these small frames, placed in any kind of hive, is, that the honey is deposited by the bees in small pieces of comb, say five inches square, which is a very convenient size for taking out to place upon the table, without disturbing the remainder of the comb in the least. In manipulating with bees, also, the different frames, A, A, or E, E, can be removed, replaced, or shifted, as may be desired.

From the above it will be seen that sections have been used inside of large frames, in the United States, about 25 years — long enough, at least, to become *public property*. **M. M. BALDRIDGE.**

St. Charles, Ill.

With the above came a picture, showing the little frames inside of the big ones, as plainly as any thing can be. This was patented Nov. 9, 1858. Now, if friend Flick tells us the truth at all, and he probably does in such a matter, the Patent Office granted him a patent for the same thing eleven years afterward, when it had already been illustrated in such a monthly as the *American Agriculturist!* That was the state of the Patent Office proceedings in '69, and I think there is no question but that the matter has become steadily worse ever since, for the reason that it becomes yearly more and more complicated. Patents of section honey-boxes have been thick and fast ever since the date mentioned above, and Prof. Cook, in his new Manual, mentions some of them, and probably alludes to this particular box. It would seem as though the Patent Office had a fashion of granting a patent on every section and box brought forward, and then the owners of these patents have been left to fight it out as best they could.

SWARMING IN MAY AS FAR NORTH AS NEW YORK.

PENNSYLVANIA NOT VERY FAR AHEAD, AFTER ALL. SEE PAGE 330.

THE swarming season opened with four swarms on the 18th inst., and some every day since. What has got into the bees, with such a cold, backward spring, to start up and swarm the first two or three pleasant days that we have? It is only ten days since fruit-bloom opened, and it has been so cold and windy that the bees have been able to fly only a part of each day till the past three or four days. I begin to think that the bees are as full of whims and notions as the bee-keepers. Or, perhaps, it is the sometimes whimsical movements of the bees which make bee-keepers differ so much in opinion. Here I have been trying to build up my colonies on the Doolittle plan; and before I have got half way through with it, the bees take matters into their own hands, and go to swarming.

I guess Doolittle can't have any fruit-trees in his neighborhood, or he would not advise putting frames of honey in the center of the brood-nest, right along once a week till white clover. My bees, instead of emptying the last frame of honey which I gave them, have filled it full of fruit-bloom honey. Cherry-bloom has been very abundant; and from the way the bees have worked upon it, it must have yielded honey very freely. Pear and plum trees are also very full of bloom, but the bees notice them but little. A few crab-apple trees, which are just coming into bloom, are roaring with bees.

I packed 54 swarms in chaff last fall, and they all came through in good condition except two, which had the dysentery during the winter, and were pretty well reduced. **JAS. MCNEILL.**

Hudson, N. Y., May 21, 1883.

Why, friend M., you have nothing to feel bad about, even if the bees did swarm in May. I don't a bit wonder at it, if you kept giving them frames of uncapped honey right along as you say. Just keep right on doing the same thing until they can get plenty of honey from the fields, and you will come out all right. I would not think of giving bees honey in that way while they are getting plenty of stores from apple-bloom. No wonder they wouldn't take it out. Friend Doolittle's directions, if I am correct, were only intended to keep up this feed when no honey was coming in from the fields.

FRIEND MUTH'S PICTURE.

THE MAN WHO HAS HIS APIARY ON THE TOP OF HIS HOUSE.

FRIEND MUTH is one of our veterans in bee culture. Years ago, when we first began to talk about movable-frame hives and Italian bees, he was one among us, and a man always posted. Of late years he has been pretty well known by his articles on the treatment of foul brood; and as he succeeds in curing it in his own apiary, we think it fair to presume he would in any apiary, if he had proper facilities. Although for many years friend Muth's apiary was on the roof of his store, or, rather, store and dwelling, it is now situated in a sort of open veranda, the open side being next to the river. Through this open side the bees go out and in. The hives are placed a convenient distance from the floor, and arranged with alleys between them. Although he has some 30 or 40 colonies grouped together quite closely, they seem to go out and in, and find their respective hives just as well, for aught I could see, as those located in the open air. The bees we saw there last fall were beautifully marked, and very docile. On next page we give you the picture.

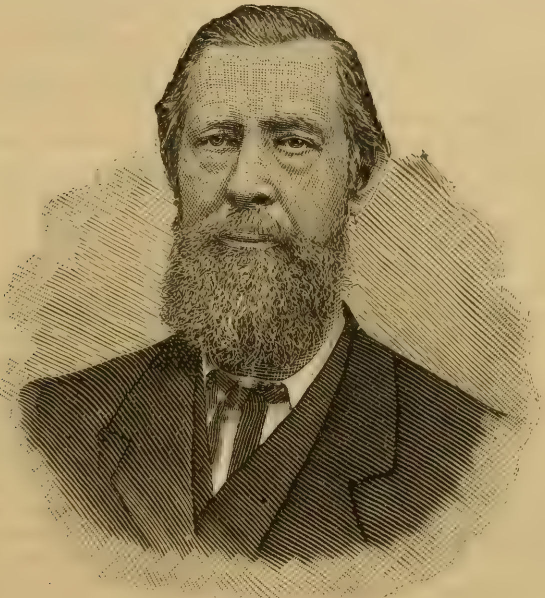
Friend Muth has, of late years, been more widely known as a great honey *buyer*, than as a *producer* of honey on a large scale. Perhaps no man in the world has bought and sold more honey than he has; and one very pleasant thing about it is, that in all these large business transactions all his customers seem to be warm personal friends.

While at the convention last fall, the subject of the palmetto honey of the South came up. Friend M. was called upon to tell what he knew about it. In order to impress upon us that the honey was of excellent quality, he made the remark that on one shipment which he had engaged for 8 cents a pound, he afterward paid the man 10, because it went so much beyond his expectations. At this point Prof. Cook arose and interrupted him. "Friend Muth," said he, "I wish to ask just one question right here." "Very well, go on," said our jovial friend. "I want to know," said friend Cook, "if the convention are to understand that this is the kind of a man you are." "It is the kind of a man I was *that* time," was the prompt reply. And

I really believe that that *is* the kind of a man friend M. has always been, and I trust always will be. We close our account of friend Muth by the following from the pen of our good friend Mrs. Harrison:—

FRIEND MUTH AT HOME.

As I was returning from Lexington, Ky., in the fall of 1881, where I had been to attend the National Bee Convention, I had the misfortune to be transferred to the wrong depot, thus missing my train, and had to remain in Cincinnati until Sunday evening. This misfortune turned out to be a blessing in disguise, for (having a mortal dread of being cremated in a hotel) I sought the hospitable roof of friend Muth, whose latch-string always hangs out to bee-keepers. I have been told, by those living in the vicinity, that they are always sure of a cordial welcome by the Muths, if they go ever so often.



CHARLES F. MUTH, THE GREAT HONEY-MAN OF CINCINNATI, O.

I found friend Muth, with beaming countenance, entertaining the youngest of the family, a little girl apparently about four years old. My intrusion upon their pleasure seemed almost like sacrilege; but he assured me that I had done the "correct thing in coming to him." During this visit I saw more of German life than I had ever seen before. When I came down to breakfast, I found Mr. Muth "gone already" to assist in a "children's feast" that was held that day for the benefit of the Lutheran Orphans' Home. In the afternoon I accompanied Miss Muth to this Home, and saw Germans as they are in the far-off "vaterland." The house and grounds of the institution, and the adjacent sidewalks and streets, were literally covered with people, as thick as they could stand — acres upon acres of Germans, drinking beer, smoking, and eating; but all was good nature; no fighting nor drunkenness. Mr. M. said that they expected to make $3000 that day, for the benefit of the orphans.

Here I learned that *one* woman in America could employ good efficient help that would remain with her. Mrs. M. told me that she had had but three girls in the last twenty years, and they all stayed with her until they were married. I can plainly see the *why*. Mrs. Muth introduced me to her friend; and as they were crowded for room, I occupied one in which were two beds — one by myself, and the other for this lady friend. I imagined that the lady friend was a visitor, like myself; but on the morrow I learned that she was the "hired girl." I could see no difference in the treatment she received, from that of their own daughter, about her own age, and she worked with a heartiness and zeal that I seldom if ever saw equaled. She was serving her *friends*.

The store and home of friend Muth, with his apiary upon the roof, are patterns of industry. His business is a great one; but all the family are helpers — the wee daughter, and the grandson, Charles the third, help with their love and prattle. Mrs. M. told me that if I would remain until the next day I could see her "cook three barrels of honey." She had six square pails that fitted into a zinc pan with a rack in the bottom, so that they were all surrounded with water. She took off the scum, as long as any rose, and then it was poured into a tank from which it was drawn through a gate into bottles. The packages of extracted honey that I saw there were as near perfection as it is possible to be.

The bees came in and out of the store *ad libitum;* and if a bee chanced to get into the hair of the round-headed German lads, it was carefully helped out, without stinging or getting injured, and customers did not mind them. MRS. L. HARRISON.

Peoria, Ill., May, 1883.

I am very glad indeed that you noted that point in regard to the "hired girl," Mrs. H., for it is that spirit we need to solve all our troubles about "help" in our homes. I noted the same thing at friend Muth's, and who can wonder that these girls all stayed until they got married?

The "Smilery."

FRIEND FRADENBURG EMERGES FROM BLASTED HOPES.

COCK-A-DOODLE-DOO-O-O-O! Ha, ha, ha-a-a-a! Put me in the "laughery," quick, before you forget it. You have had me marching up and down the path of prosperity in apiculture for the past 6 or 7 years, and now I am looking up, up, up, and have got a broader grin on my "phiz" than an Ethiopian ever dared to have. Here is what ails me: Last fall I put 26 stocks in chaff hives. All are good to-day; 2 or 3 dwindled somewhat, but not seriously. Then I put 11 in 1½-story hives, with chaff cushions inside, and corn fodder outside, and can state their condition with two letters — O. K. After getting those fixed I had quite a number that I had used to raise queens from. All had young queens, but they were light. What should I do with them? I made a hive about 5 ft. long, and wide enough to take an L. frame crosswise. I put in three well-filled frames of stores, natural fall honey; then the bees; then a ½-inch wood division-board; then three more frames of bees; then another division-board, giving entrances alternately from side to side.

When filled, I had in 7 3-frame nuclei. I do not think more than one or two had much if any more than a quart of bees, but they were mostly young bees. They were covered first with enameled cloth, then old cotton quilts; then a lid 5 inches deep, with an auger-hole in each end; then a rough box outside, with a 4-inch space and chaff, with auger-hole in the ends. And what is the result? To-day, May 7, I have taken out the two outside ones and put them in regular hives to give more room. Instead of the 3 frames of honey that I put in last fall, I took out 3 frames of brood, almost solid from end to end, and all are in like condition. In short, some of these are the very first ones to hang out this spring. This proves a theory that I have had ever since I have kept bees; viz., that queens may be wintered through in small clusters of bees, if we can get the conditions right.

But, just hold you breath a little. I am not done yet. After getting them fixed it was getting cold, and I had yet 2 light nuclei with fine young queens. What could I do with them? Kill one, and unite? They would then be too light to winter. Kill the other, and unite with some other stock? But what a pity to kill such nice queens! This I did: I put them in a hive on frames 11x11, with a ½-inch division-board between, with "No" sealed honey, and not more than half a pound each in the combs; cushions on top, and rough box with chaff space outside, and left them on their summer stand, "to starve and freeze." Wicked, wasn't it? and what about them to-day? They are both stronger than when packed, and are "gaining finely." But what did they live on? Why, I just raised the cover, and laid the contents of partly filled sections right over the clusters every week or 10 days; that's all.

But I have a disappointment. I went to all this trouble on purpose to save a few queens to give to queenless colonies this spring; but I can not find one queenless to give them to. Bad, isn't it?

And now I am to the end,
And from this rostrum I'll descend

A. A. FRADENBURG.

Port Washington, O., May 7, 1883.

Well, I declare, friend F., is that really your letter? Are you the same man who wrote that "Blasted Hope" letter on page 293 of last year's GLEANINGS? I presume you remember the advice I gave you then. It now seems that you took it, and more too. It has often been said, you know, that there is but one step from the sublime to the ridiculous. In your case it seems rather to have been a step from Blasted Hopes to Smilery. It *is* too bad, that is a fact, that you were disappointed in regard to finding a place for those two queens. Couldn't find a queenless colony! Now, why is it that you can't do this same thing again; or, rather, why can't we all do it? Was it the result of good care, or did it just happen so?

You may put me in the Smilery. My 71 stands of bees are doing well, but I am more interested just now in our blue-eyed girl, two weeks old, than in bees. J. W. BRADLEY.

Columbia, Mo., May 13, 1883.

I don't blame you a bit, friend B.

FLORIDA, BY OUR OLD FRIEND WOLFENDEN.

THE UNDESIRABLE FEATURES, AS WELL AS THE DESIRABLE.

I HAVE sold my farm in Wisconsin, and am located at Geneva Lake, same State, for the summer, but am at present in Florida on an exploring expedition. So far I am not favorably impressed with the State as a location in which to engage in bee-keeping as a business. The mangrove is doubtless the best honey-plant in the State; but I am informed that it grows only on the low coasts where the insects are very troublesome. The few bee-keepers with whom I have conversed say it is an excellent place for bees; but they keep them in the old-fashioned way, and can not tell how much honey they get, but "reckon" they get a "right smart lot."

I may locate here, if I find a suitable place in which to engage in orange-growing, in connection with bee-keeping. The former is fully as attractive as the latter, and perhaps more profitable. Groves increase in value very rapidly, and one in full bearing is valued at from one to three thousand dollars per acre. One was visited last Saturday, only an acre in extent, from which $1500 worth of oranges was sold last winter. This, of course, is exceptional. Vegetables are raised in large quantities for the northern markets. The season is mostly past now, as they are now ripe further north. Strawberries continue in bearing several months. A friend has a quarter of an acre, from which he commenced to gather and ship fruit Feb. 1; there are still plenty of blossoms, and green and ripe fruit in abundance. I am now writing under a magnolia-tree nearly three feet in diameter, on which are many blossoms 5 or 6 inches across, and the limbs beautifully draped with Spanish moss, hanging pendant 6 to 8 ft. I paced the ground covered by a large water-oak. Its diameter was more than 100 ft.; its branches were also covered with moss — the most beautiful thing I ever saw, and worth many miles of travel to see. This country is mostly sand; mosquitoes are plentiful, and the thermometer stands at 92° in the shade.

Ocala, Fla., May 15, 1883. J. L. WOLFENDEN.

THE BEST BEES FOR BUSINESS.

ALSO SOMETHING ABOUT ITALIANS ON RED CLOVER, ETC.

FIVE years ago I purchased a queen from J. H. Nellis, of Canajoharie, N. Y. From the workers from this queen I obtained the first pound of white honey that I had ever produced, this being the first colony of Italians that I had ever owned, and the only ones in the whole town. My bees previous to this were blacks, as were all others owned by other parties; and when this white honey was produced by the new colony of Italian bees, and as owners of bees in the vicinity, as well as myself, had hardly ever, if at all, produced any white honey, considerable interest was manifested, and a desire for the Italians began to develop. At the time this colony was storing white honey, the blacks were slowly storing from buckwheat that had voluntarily sprung up in fields of oats that had been devoted to buckwheat the previous year.

As I was much interested in the proceedings, I began to look about to see from what source these Italians were obtaining this white honey. As there was a large field of red clover of the medium variety just across the road, opposite the apiary, in full bloom, I began to watch to see if I could see any bees working upon it. Upon making an examination I found both kinds, blacks and Italians; but the percentage of Italians, although there was only one colony in the country, while there were hundreds of blacks, was greater than that of the blacks. I came to the conclusion at once that the Italians would work out of choice upon red clover, while the blacks at such times would choose a variety, and work upon every variety of bloom that secreted honey; and my conclusions were confirmed by finding the blacks working upon every variety of bloom then in the vicinity, but taking to buckwheat more than any other bloom. I also at the same time made a close inspection, but could find no Italians working upon the buckwheat, while the blacks were visiting the white snowy blossoms in countless thousands.

As I had obtained, by close inspection, a complete knowledge of the different sources of bloom that yield honey in my locality, I summed up the case at once, and came to the conclusion that a hybrid strain of bees, and pure blacks, as well as pure Italians, could all be kept and worked with pleasing and profitable results in a location like ours, here in this portion of Schoharie County, where so many different varieties of bloom abound, such as clovers, 3 or 4 kinds, melilot, basswood, volunteer buckwheat in the latter part of June and the first of July; while in August, thousands of acres of snowy fields of buckwheat abound in every direction.

The colony of Italians worked upon red clover, and also upon white, until the season was past for their bloom; in the mean time the blacks had kept working upon the volunteer buckwheat until it ceased to bloom, when they nearly came to a standstill. The Italians were every day busy, and slowly storing pure white honey in sections, while the blacks were gathering hardly enough to supply their brood. This kept up until the last days in July, when the blacks began to work upon a few acres of buckwheat close by that had been sown rather early, and in a few more days began with a rush, as buckwheat in general began to bloom. I now began to watch the colony of Italians, which had begun to slow up, and were now storing in the corners of unfinished sections of white honey a few cells of darker, or amber-colored honey, to see if they would take to the buckwheat, and do as well as the blacks; but in this I was disappointed. The blacks were working with a rush, and rapidly filling sections with buckwheat honey, while the colony of Italians were not doing much, and a large share of them were hanging idle upon the outside of their hive. This kept up for a few days, when I noticed that they began to work a little sharper, and from this time until the close of the buckwheat bloom they stored quite a little buckwheat honey, but a comparatively small amount in comparison to the blacks. I also found a difference when I removed the sections; those from the Italians were not so nicely finished as those from the blacks. The honey had a dark, watery appearance, caused by capping the cells direct upon the honey.

After giving the matter due consideration, I came to the conclusion that Italians would gather and store white honey while the blacks were doing nothing, unless they could find buckwheat; also that they would work upon red clover, and store a large lot of beautiful and delicious honey from it, while the blacks were slow to take to it, and gather but little therefrom. I also noticed that they used less propolis, and that the sections were much cleaner, and less daubed up than those upon the black stocks; and every year since has proved the above to be correct; and in a location like ours, I am fully convinced that workers bred from Italian queens mated with black drones will give just as much white honey, and in August, when buckwheat is in bloom, will give more, and much finer in appearance, than pure Italians.

I wish to say a little more in regard to the characteristics of the colony of Italians, above alluded to. While every colony of native bees that I had gave a natural swarm, this colony of Italians never attempted it. The next season was the same; and although I kept this queen until she was nearly 5 years old, they never attempted to swarm but once. I reared a good many queens from this colony, and a greater portion of the queens and bees which sprang from this colony show the same traits as did the original stock. I also had a few colonies that refused almost entirely to work upon buckwheat, as a drop of dark honey could rarely be seen in their hives. I also sold a queen from this same old colony of Italians to E. W. Haverly, of this town, and he has informed me that they would almost entirely refuse to work upon buckwheat; and that, while other stocks were storing dark or mixed honey, this colony was storing light. The result of my experience and observations for the last five years has convinced me that, in sections, where their main dependence is buckwheat, a hybrid race, from half-bloods down to nearly pure blacks, will give the best results; and in sections where there is a variety of bloom, such as clovers, sumac, etc., with an abundance of buckwheat, the apiarist will be better satisfied to keep all grades, from a part as pure as he can, some half blood, and some pure blacks; and in sections where the main dependence is white and red clover, basswood, and melilot, then keep nothing but pure Italians, or as nearly pure as he can keep them. In view of this I shall keep my home yard all pure Italians (that will give me beautiful honey from red clover), also a yard of half-blood and lower grades, while further on, among the extensive fields of buckwheat, a yard of pure blacks. F. BOOMHOWER.

Gallupville, Scho. Co., N. Y., April, 1883.

We have had the same state of affairs in our own apiary; namely, Italians storing white honey from red clover, and filling sections, while hybrids brought in nothing but dark honey from buckwheat. In fact, I have noticed this so many times, as well as your remarks about more propolis from blacks or hybrids, that I have decided this one point alone to be a sufficient reason for keeping the Italians instead of the common bees. I have no doubt but this non-swarming trait you mention might be developed without much trouble, by careful selection.

PLENTY OF ROOM.

THE SYRIO-ITALIAN—THE NEW RACE OF BEES.

HERE I come, with a lot of bee talk. If you remember, Chas. Dadant used to tell us that, to be successful in the management of bees for extracted honey, we must give them room, plenty of room. Now, I think Mr. Dadant exactly right about that. The time was when I used to try to get the brood-chamber as full of bees as I possibly could before I put on the second story, containing store combs (and probably I had my bees just ready to swarm then); but it was advised by older heads, and of course it had to be done, and I used to manage my bees in a small brood-chamber (such a one as one of our Syrio-Italians would fill in the morning before breakfast). Now, in this climate, in the spring, when the queen has really got herself down to work, depositing eggs, and the hive is ¾ full of bees and brood, I put store combs on; and I find that, if honey is coming in, by the time the brood-chamber is full of brood the bees have the store combs cleaned up, and have commenced storing. I let them fill 3 or 4 combs; then on goes another set of combs on top of the first; don't say I have made a mistake, and that the first set should have been raised up, and empty ones put under them; not much; I have tried the plan of raising the partly filled story, and putting empty combs under, but I invariably find that the bees use this middle room as a sort of loafing-place, a kind of "corner grocery" where they can talk over the subject of swarming, while those bringing in honey march right through this second set of combs, and store their honey in the top box, every time.

Now, is it not nature for them to do it? James Heddon once said, "Bees hive much easier upward than they do downward;" and about that, Mr. H. is right. I put my second set of store-combs on top of those partly filled, the heat of the hive rises to the top, warms these combs, making them soft and pliable; the bees go to work on them, and there is no stop or hitch in their work. I have had bees swarm, lots of times, when there was not one pound of honey in the lower set of combs, while the upper ones would be full. But I do not have much trouble in swarming, if I put the empty combs on top, if I put them on in time. Sometimes I neglect it, and then they swarm. I tier up sometimes as high as the third set of combs above the brood-chamber, and the Syrio-Italians find no trouble in getting to the top. This is the 20th day of April, and I have, standing right before me, Syrio-Italians working in the 3d set of combs above the brood; but only one is doing this. The watchword of the Syrio-Italian is "onward and *upward.*" This is my 3d year's experience with this strain of bees, and (for this climate) I consider them as much superior to the pure Italians as the pure Italians are superior to the blacks. (I have no queens to sell.)

It is very easy to see why bees swarm when in a normal condition. I think that, in 19 cases out of every 20, it is because they have not plenty of room. It is my opinion, that the queen has "nothing to say" about this swarming business; if the hive is too small to accommodate the bees, they must hunt new quarters; and as all know that, when they once get the swarming fever, 'tis hard to get that notion out of their heads, I say give them room, and before they are crowded, and give it to them in a shape that thay will use it. Again, it is my opinion that this tiering-up system is the correct way to manage bees while running for extracted honey; for 'tis easy to see that, in 3 or 4 boxes, we have more bees than in one or two boxes; and the more bees we can keep together in one body, the more honey we shall get. And the great advantage of having the honey fully ripened in the hive fully pays for the extra amount of labor spent in uncapping the full comb.

A. W. OSBURN.

El Monte, California, April 20, 1883.

Friend O., I am right with you in your plan of tiering up hives of empty combs. I have tried it, and I know it is good for extracted honey, or honey in frames, and I don't know but it will work well also for honey in section boxes. I am inclined to think that your new race of bees, a cross between the Syrians or Cyprians, and Italians, are going to be grand bees for collecting large quantities of honey, especially if you give them room.

THE HONEY-BEE.

ITS FOOD, GROWTH, AND HABITS.

THE first 21 days from the time the egg is laid is spent in the cell, at the end of which a perfect worker bee emerges. While in the cell the food is bee-pap, a substance prepared by the worker bee, and placed around the larvæ. It is composed of honey, partly digested, and the saliva of the worker. The larvæ subsist entirely by osmosis; it can not eat, and food of a grosser nature would not nourish it. With reference to its food, this is its first stage — the stage of growth.

Immediately upon leaving the cell, the worker wanders over the comb in search of food. Its appetite has now been acquired. It passes over cells of uncapped larvæ containing bee-pap, leaving it untouched. It has never had a taste for this; and over cells of pollen, a taste for which it has not yet acquired. It now subsists exclusively upon honey. Here again the Ubiquitous Life Power, the living principle of the bee, that enabled it to recognize the affinity existing between itself and the young larvæ, and forces it to prepare suitable food for its development, enlightens the worker in reference to the necessary food of the infant worker, and impels it to encircle the brood-nest with uncapped honey; pollen, too, is furnished for its convenience; but honey is given the preference. The bee has now reached the age of usefulness, and the Life Principle within foreshadows to it what is necessary for its preservation. Immediately upon acquiring the free use of its limbs it sets about cleansing the hive, preparing food for the larvæ, starting queen-cells, if queenless, exercising its wings in playspells, gathering honey, protecting its hive by stinging, building comb, and on the eleventh day, perhaps sooner, gathering pollen and propolis. It has now acquired a taste for food partly indigestible, and can not subsist without an occasional cleansing flight. It has passed through the stage of habit development into that of decline — it is fully matured. Its habits continue to the end, though less conspicuous. The habits of the queen bee, which hatches from 16 to 18 days after the laying of the egg, and of the drone, which spends 24 days in the cell, are made, in some cases, to coincide with those of the worker. Thus we see the young worker bee taking its playspell, which in its old age is changed to a cleansing flight, after 12 o'clock, the time of day when the sun's rays have warmed the atmosphere, and rendered it the most safe to leave the hive. So with the queen; after 12 o'clock she leaves the hive to meet the drone; and after 12 o'clock, when not pressed by her motherly duties, she leaves on her cleansing flight. The drone is allowed more limit, but chooses the warmer part of the day for his flight. The necessity of a cleansing flight once recognized, the apiarist will see the necessity of protection for bees while taking the flight, and also of conditions that are calculated to lead them to fly. Probably this necessity of a cleansing flight would not exist were bees confined exclusively to digestible food; but as long as they have access to pollen, the indigestible part remaining will act mechanically upon their systems, and force an action of the bowels when, if the conditions do not favor a cleansing flight, disease will follow as a result of their confinement to the hive.

FAVORABLE SITE FOR AN APIARY.

Grounds descending to the south should be chosen, near a never-failing source of water supply. Nothing whatever should be left to shade the ground, and its surface should be made smooth. Under these conditions nothing will interfere with the labors of the apiarist; the concentrated rays of the sun will dry the grounds rapidly, and surface water will flow off quickly. The atmosphere near the ground will become warmer than on a level surface, and the bees will be encouraged to fly during the heat of the day. For the protection of the bees, should no natural protection exist, a tight board fence should be built on the west, north, and east sides. The hives should be set facing the south, to receive the full force of the sun's rays upon the entrances during the hottest time of the day in winter, when the workers leave the hive. They should lean a little to the south; this will cause the water to flow from the entrance, and make it easier for the bees to remove waste material and dead bees. We exclude all shade, that the bees may have the full benefit of the sunshine throughout the whole year, and exercise the habit of flying from the hive whenever the weather is suitable. No bees but diseased ones leave the hives at unsuitable hours, and these are better out of the hive than in it. We do not allow any thing among the hives to obstruct the circulation of the air, because it will become heated in centers, and the combs melt down, when, if the circulation is not obstructed, they will stand a heat of 110° with safety. We have reached these conclusions by years of experience, and found safety in the sunshine, when combs in hives set between trees would soften and break down.

THE HIVE AND FRAME.

In handling this subject, one necessarily passes over dangerous ground; for does not each one have the best hive, as he does the best dog and the best religion? I will be courteous here, friend Root, and I will be discreet; for I am dealing with matters of opinion and of experience only, and others have experiences and opinions. It seems to me that a hive should be large enough to contain a brood-nest of sufficient size to allow the queen room to gratify all her desires for increase, and to contain all the honey that a strong stock of bees can gather while it is evaporating sufficiently to be extracted, and some larger for the convenience of the apiarist, who may be delayed about his work. Certainly if bees gather honey in proportion to the numbers in the hive, the greater the number in the hive, the more honey will be gathered; and the longer they have room to put honey in, the more honey they will collect. Our experience is, that strong stocks of bees gather from three to four pounds of honey a day when there is a good flow of honey; occasionally more. Honey does not become sufficiently ripened to be in suitable condition to extract under 8 or 10 days, and the apiarist frequently meets with delay for a few days, during which time the bees must have room to store honey, or they can not work. A queen, during the best of the season, will lay eggs enough to fill, except near the frame, twelve frames of comb a foot square. Some pollen will be gathered, and placed around the space occupied by the brood. At the above rate, for the bees to gather honey, and allowing two days' delay for the apiarist, we shall require ten more frames a foot square, allowing that they hold 4½ lbs. each, possibly more, if there is an unusual flow of honey. A hive of two stories, containing 12 frames each, is of suitable size, but too high for a windy country. One containing 18 frames below, and small frames or boxes above, will not blow over, and is of sufficient size.

SIZE OF HIVES.

For ten successive years we have used hives holding from 9 to 18 frames, a foot square, in the lower part, and small frames or boxes above. Invariably our yield of honey, both comb and extracted, has been proportionate to the size of the hive, two large hives yielding about as much as we got from three small ones. At all times, when wishing to handle the combs, we could drive the bees from the end where we wished to work, and they found room elsewhere, and the combs could be replaced, and the bees not crushed. In the small hives they could not be kept out of the way, and some were killed in handling the combs. To the above advantages we must add that of wintering better in the large hives. The fourth hive from the east end of the north row [*see page* 238 *of our last number*] is a Langstroth hive of 8 frames. To test the advantages of this hive, if any, we have kept bees in it for the last two years. In yield of honey it compares reasonably well with other hives of the same size — no better, probably no worse. It has the objection of the small hives, mentioned above. The bees can not be kept out of the way of the frames, and necessarily get crushed more or less. The frames are inconvenient to handle, and the combs break out worse than from the American frame. A frame 10 inches deep and 14 long would be a convenient size to handle. A hive 23 inches long by 15 wide and two stories high would hold 32 frames, if placed 1 7-16 inches apart from center to center. Such a hive would not blow over, unless very light, and probably not then.

JEROME WILTSE.

Falls City, Richardson Co., Neb., April, 1883.

I agree with you pretty nearly, friend W., in all that you have said; but may I suggest that you prefer your other hives to Langstroth, because you are accustomed to them? It seems to me that if all your hives were Langstroth, with only one of some other size, very likely you would find that one, whatever it was, more trouble to handle than the ones you are accustomed to handle day after day. Our chaff hives would furnish all the room, I presume, that you would care for; and for getting the requisite room in the Simplicity hive, I would suggest using them three or four stories high, which we often do. I never heard of the wind blowing them over when three or four stories high, and there would surely be no danger after the bees had got the upper story pretty well filled with honey, as they are almost sure to do during the honey season.

SOME LESSONS FROM EXPERIENCE.

SUCCESSFUL WINTERING ON STORES, PARTLY GRAPE SUGAR.

THE season of 1882 was on the whole an unfavorable one in this part of the country. There was no honey to be gathered in May; and white clover in June, and linden in July, yielded about half a crop. After that, little honey was gathered. But as there was enough of honey and pollen to stimulate breeding, and the combs were not filled with honey, they were filled with brood. Thus it happened that, when September came, the hives were crowded with bees, and what honey had been stored in July was nearly used up. Where natural swarming was allowed, the swarms were numerous, and generally large, and the old-style bee-keepers were jubilant. But now every man of them has his finger in his mouth. Their bees nearly all starved to death. I know of only two living colonies within two miles of this place. But I am more "lucky." It came in this way: When, about the middle of September, I found my bees without honey, and not gathering any, I fed them up for winter.

WHAT SHALL WE FEED FOR WINTERING?

Grape sugar will not do. It is cheap, but it soon solidifies in the combs, and the bees can not use it without water. Extracted honey will not do. It costs too much; and if it is ripe, and not heated and thinned with water, it will candy in the combs, though it be sealed up, when cold weather comes. Then, unless the bees have a supply of water, they will get dysentery, and die. Pure white sugar *will* do. As granulated sugar can usually be bought by the barrel for something less than 10 cts. per pound, and 8 lbs. of sugar and 5 lbs. of water will make more than a gallon of syrup, it makes a good and cheap food. But any kind of sugar made into syrup, has a tendency to part with the water and return to sugar again, as every one has seen who has tried to use on the table a molasses made from sugar. As others had tried it and succeeded well in wintering, I decided in favor of granulated sugar. But I happened to have over from former years a quantity of that much-reviled article, grape sugar, and I did not like to throw it away; and as I knew that 20 or 40 per cent of grape sugar, added to the granulated sugar, would keep it from parting with the watery particles, and from granulating again, I decided on using them together. I fed up all my colonies with this syrup in September. About one-half of it was sealed up by the 1st of November; the rest of it remained liquid. The bees had their last flight the 12th of November. Those wintered on their summer stands did not get another flight until the 1st of March, or for 109 days. Those put in the cellar were not returned to their stands, and did not have a flight until the 5th of April, nearly 5 months, or 144 days. Every colony came out strong and healthy, with few dead bees, and no signs of dysentery. I give this experience for what it is worth.

HOW TO FEED — A VERY SIMPLE FEEDER.

I had on hand several dozen of Mason quart jars. I cut thin cotton cloth into pieces about 5 inches square. After filling the jars I put over each a piece of cloth, and over this I put the gum ring which belongs to the jar. I laid strips of wood, about ½ inch thick, 2 inches apart on the comb-frames, and turned down, on these strips, from one to eight jars of syrup, according to the need of the colony. I put a second story on to cover the jars, and left them for a few days until the syrup was all stored away in the combs. In this way I could give each colony all it needed at one time, and finish up the whole business of feeding for winter in one day. Before feeding, all combs which are not needed in the hive in winter should be removed, and the combs which are left should be properly spaced. Of all the feeders which I have tried I find none so convenient as the Mason jars with their gum rings.

HOW TO INTRODUCE QUEENS.

I have tried nearly all the plans which I have seen recommended, and have found no one as good in my hands as that of immediate introduction with smoke. Friend Root, after reading about your success in turning so many queens into the entrance of the hives late one Saturday night, I tried that plan of letting the queens run into the hive late in the evening. It was generally successful. But occasionally it failed. After that, I tried blowing in considerable smoke after the queen, and was uniformly successful. Last summer I was trying to get first-rate queens into all my colonies, and consequently had a good many to introduce. As soon as I removed the queen to be supplanted, I shut up the hive and puffed in at the entrance enough smoke to alarm the whole colony, and make them fill themselves with honey. I then turned the queen to be introduced in at the entrance, and puffed in enough smoke after her to make it impossible for the bees to smell any thing but smoke. I did not lose one queen introduced in this way. On the other hand, I always found these queens, a day or two afterward, on the combs, and laying as if in their old hive. The only exception was in the case of a colony which had been queenless for some days. But when one queen is taken, and another given at the same time, if the bees are well smoked they never seem to know of the change. When honey is coming in plentifully, this method can be practiced any time in the day; but if there is a scarcity of honey, there is danger of robbing, unless it is done in the evening. When honey is scarce, some robbers will usually follow the operator as he goes from hive to hive. After a colony is thoroughly smoked, the bees seem to be unable for some time to distinguish strange bees from their own. Several times last summer I had to go to the relief of colonies to whom I had introduced new queens; and while there was great excitement about the hive, I found the robbers coming and going without molestation. But if the colonies are smoked, and the queens introduced in the evening there will not be much time left for robbing; and by the next morning the bees will be able to distinguish their own, and be ready for battle. But after smoking a colony, it is perhaps always best to contract the entrance for a few days.

Milroy, Pa., Apr. 25, 1883. JOHN W. WHITE.

Thank you, friend W. Your experience with granulated sugar and grape sugar combined seems to have been quite favorable; and although I am pretty well satisfied that bees will often winter well on the mixture, I hardly think I would advise it, inasmuch as we have had some quite unfavorable reports from those who did use it, as nearly as I can remember, in just about the way you have done.—In regard to introducing queens, I really believe you have struck on something valuable, although the plan you have given, of using smoke, is not new. Your idea of performing the operation just at dusk seems to me as quite an important item. If I understand it, to sum it up in a few words, it would be about this: Go to your hive any time in the evening after the bees have stopped flying. Remove the old queen, smoke the colony until the bees have filled themselves with honey, let your new queen run into the entrance. Smoke them again, and it is done. From what experience I have had in the matter, I am inclined to think that queens lost by this method would be so few that the time saved (in connection with the fact of having a laying queen in the hive again in a few hours) would amply pay for all loss. If the operation were performed when honey was coming in rapidly, perhaps it would not be necessary to wait until just before dusk, as mentioned.

FRIEND POND'S EXPERIMENTS ON WINTER PROTECTION.

FOREST-LEAVES VERSUS CHAFF.

I HAVE for a number of years been experimenting with double and single walled hives, using the Langstroth frame almost wholly, yet having the American also, in order to compare results with a deep and shallow frame. So far as frames are concerned, the American has been thrown aside, for the reason that I have not had as good success with it as with the L. I have used chaff, sawdust, and cut straw for filling in double-walled hives, and also used no filling whatever; and the opinion I have now formed is, that a perfect dead-air space in a double-walled hive is as safe as if the same space were filled with chaff, or any other substance. My theory is, that there being no better non-conductor of heat than *dead air*, any substance that we may use to fill the space between the walls of the hive is worse than useless. If I am correct in my premise, viz., that there is no better non-conductor than dead air, then my conclusion is not only logically but practically correct. When I say *dead*-air space, I mean exactly that; and my plan of forming this dead-air space is as follows: I take, in the first place, a box, say 5 or 6 inches longer and wider inside than a Simplicity is outside in its dimensions, and about 2 inches deeper than the Simplicity hive. On this box I nail a tight double bottom, with 3-inch space, with entrance as usual in front end. On the inside of this bottom-board I nail cleats 1 inch square, just long and wide enough to allow a Simplicity hive to go inside of them, and down snug to the bottom-board, leaving a bridge ⅜ inch high in front end for entrance. This fastens the inside hive firmly enough to the outside one for all practical purposes. I now fit pieces of ¼-inch stuff tightly between the outside of the inner hive and the inside of the outer, which serves to brace the inner hive strongly in position. When I prepare my bees for winter in this hive, I put on a half-story, cover the frames with a fine burlap mat, and fill over it with a cushion filled with forest-leaves, say 7 or 8 inches thick. I also put cushions of the same against the outside of the inner hive, thus completely closing in the 4 sides and top with these cushions of leaves. I rabbet the top of the outside hive on the inside, and make a cover rabbeted on the inside that will fit over all tightly, boring a 1½-inch hole in each end of this outer cover to allow the moisture to escape. When this outer cover is put on, I consider the hive as well fixed for winter as it is possible to fix it, after giving about 4 inches space for entrance. There is nothing to conduct heat out from a hive, or frost into it, except bottom-board and the pieces of ¼-inch stuff, and these latter are so high up that there can be no damage done by them as a conductor.

I use inside the inner hive a 1½-inch air-tight unfilled division-board on each side, for further protection. I may not be correct in my ideas; but 3 or 4 years of practice with the best of results has certainly convinced me that I am, and in the future I shall adopt just this plan. A nucleus put up on 3 frames last fall came through all right (in fact, every colony did also) this last winter; and when opened for the first time, about April 1st, had plenty of stores, and both sides of the middle frame nearly filled with brood, and some drone-cells capped with all the rest.

My bees, with the exception of one hive, have not spotted the snow this winter, and I have had no dwindling at all. The above speaks well, I think, for dead air space, and especially for the much-decried bad-wintering standard Langstroth frame.

J. E. POND, JR.

Foxboro, Norfolk Co., Mass., April 30, 1883.

Why, friend Pond, is not that a little queer, to lay so much stress on the dead-air space, and then tell us that you filled the space with forest-leaves? I have been for some time thinking that perhaps our chaff packing was not sufficiently porous, and that something like coarse shavings, or forest-leaves, or even empty sections in the upper story might give better results than our too warm chaff cushions. Very likely, dry forest-leaves will give just about the desired quantity of air. This will be better than no protection at all, and yet it would amount to nearly the thing as the old box hives cracked from top to bottom, that have been quoted so constantly year after year. I have told you of my experiment that satisfied myself, at least, that bees would not, as a rule, winter well with no protection over the combs. After this we adopted the soft loose chaff; but during the severe winter, many times this seemed to give too little ventilation for heavy colonies. Now, if we use forest-leaves, I think we shall have it about right. I am inclined to think I should prefer them, however, put loosely into the hive instead of in sacks of burlap; but as they would be very inconvenient to handle in this shape, perhaps the loose burlap cushions filled with forest-leaves will be about what is needed.

SOME GOOD SUGGESTIONS FROM FRIEND EWING.

LET THE BUYER TEST THE QUEEN.

THERE has been a great deal said in all the bee papers and books about the trade in queens. The scientific bee-men have condemned the dollar-queen trade in unmeasured terms, and many of the practical breeders have enlisted on the same side; but in spite of all this opposition in high quarters, the great judge, public opinion, has steadily given the decision in favor of them. Now, to dispose of this subject, and prevent the apprehended danger of degeneracy in the stock by this trade in untested queens, why not make every buyer his own tester? Both the queen-breeder and purchaser would be the gainer by such arrangement. About the only test in the matter is to ascertain whether the queen is purely mated. Beyond this there is no safeguard against a dishonest breeder. He can, if he will, force queens, and produce short-lived, tender weaklings. The buyer has to trust to the honesty and skill, in breeding, of the seller. Where the whole country has become Italianized by extensive breeders, there is not one queen in six — probably not one in ten — that is not purely mated. If the queen-breeder has only to wait till his young queens are fertilized, and then ship, he can afford to sell them for a dollar; or if his stock is extra, and has a very high reputation, it will command more. In place of keeping his queens for probably a year to test them, suppose he ship them, as soon as fertilized, to the purchaser, and allow him to test the queen. If she proves a fine bee, he is the gainer by getting a young queen in all her prime, and both parties are gainers. If the queen prove to be a hybrid, unfertile, or is lacking in any of the qualities that constitute a tested queen, let the buyer mail her back to the breeder at the buyer's risk, or at the risk of the breeder, as they may agree, and have another queen shipped. By adopting this plan, all queens would be virtually warranted, and yet sold at the lowest figures, and the worthless queens be weeded out.

BEES FLYING 90 MILES AN HOUR.

In March GLEANINGS, Doolittle's theory of bees flying 90 miles an hour is again alluded to. A moment's reflection will show the fallacy of such a test of speed. The cars were running at a speed of 30 miles an hour when the bees were released, and kept up with the train, flying in circles over it, making three times the speed of the cars. The train rushing through the air causes a vacuum, which is immediately filled by pressure of the atmosphere from the rear, the side, and from above; the bees held in this vacuum will be kept above the cars with scarcely an effort, and can circle in the vacuum as they are borne forward by the pressure of the atmosphere from behind; and if the train ran a hundred miles an hour they could easily retain their position directly over it. In fact, they would be held there while they kept on wing in small circles, with no power to escape.

STENOGRAPHIC WRITING.

Making GLEANINGS is harder and more exacting work than running those 400 colonies of bees, the factory, lunch-table, and all thrown in; and I know whereof I speak; but you say in March No. that you can not afford a short-hand writer to assist in this accumulating work. With all due deference to your opinion, I don't think you can afford to do without one. With a stenographer you could do three times the amount of work that you can perform with your own hand, and with infinitely less exhausting labor. Holding the unbroken thought on the pen's point is the great labor as well as the great art in book-making and correspondence. One of your smart girls would learn in six weeks or two months, by taking a careful daily lesson, to take down in stenographic characters a slow dictation; and with a little further practice she would be able to write as fast as you would wish to dictate carefully. And while you were reading, and preparing comments for another letter or article, she could have her notes copied for the press, and read them to you. By this labor-saving method you could prepare copy in one-third the time, and with more satisfaction. It would be like laying aside the hand-saw and jack-plane for the buzz-saw and machinery in hive-making.

My bees are lively and strong, with scarcely a corporal's guard of mortality to the hive this winter, and have been carrying in pollen every warm day this month. The box-hive and log-gum men are generally tearful. E. E. EWING.

Highlands, N. C., March 24, 1883.

I believe, friend E., that people generally agree with you in regard to letting each man test his own queens. That is, those who purchase prefer to do their own testing. The plan of warranting queens has not given very good satisfaction. It seems to me that the best way is to sell the queen for so much, and let that end the matter. If the purchaser does not find the goods up to what he expected, he probably won't trade with that man very much more, and in this way dishonest breeders soon kill out their trade. This rule, I believe, follows with all kinds of merchandise. Or, in other words, dishonesty proves to be a very poor policy. One who has for years sent out a good grade of queens at one dollar each, finds he is full of business, and there are now great numbers of queen-breeders who are building up a nice business, and accumulating a nice property by selling queens at one dollar each, without any warrant more than I have given above.—I agree with you, that there must be some mistake about bees flying 90 miles an hour, or, at least, so it seems to me. In riding in a buggy I have often kept up with bees, and without driving fast either, when they were going to and from a buckwheat field that lay in the direction that I was driving. I would suggest, they flew from 10 to 15 miles an hour—probably the former rate when they were coming in with a load, and the latter when they were going after a load.—I agree with you in regard to the short hand writing. Practice has demonstrated exactly what you have stated above. I would now almost as soon think of dispensing with almost any of our modern improvements in the way of saving time and hard labor, as to dispense with this one great help in my labors. Our stenographer criticises you a little in regard to the time taken to acquire it. She thinks it would be hardly possible for even "a smart girl" to learn so as to take down even slow dictation, by daily lessons for six weeks.

COMBINED CASE AND CRATE.

HEDDON'S EXPERIENCE ON SEVERAL POINTS.

AT the first advent of sections, I one day asked myself, "Why can we not have one receptacle that will answer the double purpose of storing on the hives, and shipping to market?" Many were the hours I spent studying this problem, and then gave it up as impracticable. My mind was next called to the subject by seeing a cut and advertisement of a case for the same purpose, in one of your circulars. I examined it closely, and, from my experience, studied the matter over again thoroughly, again abandoning the idea. In Feb. GLEANINGS, page 59, friend Walker comes forward with the same old idea. I have studied the article closely, have one of friend Walker's sections, and still I can not accept his arguments as valid, or his section as a good one. Said section has not the strength of good, all dovetailed work. The style of the projections, as illustrated on page 61, makes a very homely section, and one more difficult to manipulate in and out of its case. I am radically opposed to any thing tending backward toward the old dauby slip-shod system; and from conversation with honey merchants in our larger cities, I am convinced that nothing presents a more distasteful appearance than propolis sticking to the sections. Any receptacle that can be anywise comfortably manipulated on the hives, will cost much more than a new clean shipping-crate, and not answer the purpose nearly as well. Our sections, when crated, will stand any jarring that the same will in the case in which it was stored. I have had only two cases of honey broken, since I can recollect, and they were promptly paid for by the railroad company.

Mr. Walker speaks of so placing the slats that they exclude the queen from ascending into the surplus department, and Mr. Myers, on page 116, March No., thinks "Friend Heddon uses strong language regarding his queen-excluding honey-board." I do not call mine a queen-excluding honey-board, and I have laughed, when reading, at the ideas some have, that wooden slates can be so adjusted as to strain out the coarser bees in a reliable manner. My honey-board is simply so arranged that it *discourages* the queen from going above.

In the use of some 600 28-section cases last season, I remember of only 5 or 6 sections being entered by queens, though in a great season for breeding. My experience teaches me that the zinc queen-excluding honey-board is impracticable and useless. Further, that there is no labor that we perform in our business, that pays a greater dividend than that of neatly cleaning our sections, and recasing them in a new clean crate. A nice attractive section at $10.00 per 1000 is cheaper in the end than poorly made homely ones, as a gift.

GETTING BEES OUT OF THE HONEY-BOXES, ETC.

On page 115, friend Myers tells us how perfectly the Doolittle plan of getting bees out of boxes will work. I used to use a double-walled wintering room (with walls 1 ft. thick), in which to receive my honey, till the bees left the boxes. The sides of the building (counting both stories) were 16 ft. high. The only light came from a small revolving sash. The outside was boarded up and down, and battened with ⅞ bats. Over this window I tacked wire screen, making it fast at ends and bottom, but extending it up the bats some 2 or 3 feet, it lying off from the boards ⅞ of an inch. As bees have a tendency upward, those retiring from the boxes passed out readily. Success seemed mine.

EDUCATED BEES.

Soon, however, they learned the way back. I then extended the flue upward to the top of the building, some 12 ft. above the window, by the use of burlap tacked on above, and the same as the wire cloth. The exit of the bees was as complete as before, "and now let's see you find the way back." But they did it, descending the whole 12 ft. with the bravery of an old country chimney-sweep, and that, too, bees that had never practiced with the wire cloth alone, before the burlap extension was adjusted. A second trial of the same fixture proved that, for memory and business habits, the bee has no living equal. With our present tiering-up method we smoke nearly every bee down out of the supers, before removing from the hives. The few that remain fly on a window, and are revolved outdoors. Robbing is thus absolutely impossible.

JAMES HEDDON.

Dowagiac, Mich., Apr. 4, 1883.

Your ideas are good, friend Heddon; but are you not overlooking the fact that these pound cases and crates are very extensively used all over the country, and that tons of honey have been marketed in them to the satisfaction of all parties concerned? You remember, too, that friend Walker told us how readily his honey sold, and states that he has already made a practical success of it. I know there are objections, as well as good points, in both ways of putting up honey; but friend Walker's plan has the merit of being very much less expensive in both time and money, if I am correct.—Your educated bees are about what I expected we should find if we adopted Doolittle's plan to any great extent. However, the plan may answer in the majority of cases, or until the bees "get the hang of it."

WHY SHOULD BEE-KEEPING BE RESTRICTED?

OR, WHY SHOULD ANY ONE BE DISCOURAGED FROM ENGAGING IN IT?

BRO. HEDDON, in an article begun in March GLEANINGS, and concluded in the April No., gives voice to the idea that no one should keep bees in any locality where some one else has started an apiary first, and intimates quite forcibly that the supply dealers have injured the occupation of bee-keeping by selfishly urging parties to engage in it, presumably that more sales of goods might be made. Now, I like Bro. Heddon tiptop, and I know that he likes me too; but I do think that a little grain of selfishness lies at the foundation of his courteous strictures. In order to sugar-coat his little pill, and with an evident desire to divert suspicion (a suspicion, too, which it is evident troubles him), he says he can not be accused of selfish motives, because he is a supply dealer as well as a honey-producer. True, he asserts that he has no opposition at the present time; but the success that has followed his labors at Dowagiac, as shown by him in his reports, may induce some one, if urged strongly by some supply dealer who is not also a honey-producer, to enter into competition with him, and occupy a portion of the field now foraged by his bees alone. The great danger that he seems to fear is overstocking. Bro. Heddon is a practical bee-keeper of many years' experience; he possesses a vigorous and well-trained mind, and is a logical as well as copious writer; he understands the science of bee culture well; and as proof thereof he has made a success of the business; but with all these excellent qualities at his command, it strikes me rather forcibly that his fear warps his judgment, and causes him to imagine trouble where none exists. Of course, I know nothing of the possibilities of honey secretion in the West, save so far as I have read reports from bee-keepers in its various sections; but I do not believe it will be possible to overstock that portion of the country with bees in this or the next generation. There has been a great hue and cry in regard to this subject ever since I first began to keep bees; but I have yet to learn of the first man who has been forced to relinquish the business simply because too many bees were kept in his locality. If the opinions that I have heard expressed were in any danger of becoming facts, bee-keeping, instead of attaining the high position that it now occupies would long ago have sunk into utter insignificance. As the flight-range of the honey-bee is limited to a circumference whose diameter is about 8 miles to an individual colony, it is *possible* that some particular localities may become overstocked; I say *possible;* but there is no probability that such will be the case for many long years, if ever. The flowers secrete and exude their nectar in such a manner that, if a single colony of full strength, and ordinarily vigorous, can gather abundant stores, hundreds of colonies can do the same in the same locality, if working under the same conditions. We all know that a colony must be powerful just when nectar is being secreted, to be of any value; and we also know that this nectar is being secreted continuously; and unless it is gathered then and there, it is absolutely and for ever lost. If a locality is wholly unsuitable for keeping bees, a single colony would overstock it; that is, they would be unable to obtain a living from it; but such localities are exceedingly scarce, and avoided by bee-keepers as they would a pestilence.

Let us look for a moment at Germany. Mr. Wagner has informed us that in Munich, Ehrenfels had 1000 swarms at three separate establishments, but so near together that he could visit them all in a half-hour's ride (six miles in half an hour is a pretty good rate for a horse to travel). He says, that in Russia and Hungary, apiaries numbering from 2000 to 5000 colonies are very frequent, and not far removed from each other.

If any desire to follow up this matter of proofs further, I will refer them to the article on overstocking, in Rev. L. L. Langstroth's "Hive and Honey-Bee," third edition, where they will find the matter fully discussed. There is no doubt but that the poorest districts in New England are equally productive of honey as those of Munich, Russia, and Hungary, already mentioned; and if this is true of poor sterile New England, where the sheep have their noses sharpened in order to pull the forage out from among the rocks, what shall we say of the fertile prairies of the West, where no rocks, not even pebbles, are found, and where abundant foliage and flowers are indigenous to the soil? If honey were secreted on the same principle that grass grows, overstocking would easily be accomplished. A flock of sheep will soon graze down all the forage in a given locality, and it takes a long period of time for the grass to again grow; but the flowers are constantly secreting honey, while in bloom; and if the drop of nectar is taken, it will require but a moment or two to replenish it: if not taken, it is lost for ever.

Prudence should be used in all our operations; but that extreme prudence which is constantly looking for dangers where there is no probability of their existing, is simply cowardice; and we, in the use of proper prudence in relation to this matter of overstocking, must bear in mind that, while so vast an area of land of the utmost fertility, unoccupied save by the luxuriant foliage which covers it, still exists within the vast bounds of the United States, there is no danger of overstocking the whole country; and, also, that while the flowers in the unoccupied portions of the country secrete their honied sweets in the same proportion, and in the same manner that they now do, no one need feel concerned, no matter how many colonies he keeps, on account of encouragement given to parties to newly engage in bee culture. J. E. POND, JR.

Foxboro', Mass., April 6, 1883.

Very good, friend P.; but why didn't you in your "wind-up" advise all who feared trouble from overstocking to "go to Texas" and raise horsemint honey?

FLORIDA.

BY REV. JAS. H. WHITE.

A MULTITUDE of anxious inquirers are turning their eyes to this fair "South Land," with the thought of seeking here a home. Probably to-day no part of the earth is so earnestly inquired about by so many people as Florida. Bee-men, if possible, are more earnest than the general mass. Not only do they want to know about "bees in Florida," but about every thing that concerns a man who is seeking a new home. Some months ago I wrote for GLEANINGS an article entitled "Our Bees," that brought me inquiries from most of the Northern States in abundance. All who sent stamps for reply have been answered, and I now purpose to answer the same questions through the columns of GLEANINGS for the benefit of its readers who are looking this way, and thinking of a home where snow and ice never come, and where bees need no "wintering." By the way, all that part of bee literature that relates to wintering is of no value here.

INDIAN RIVER.

Who has not heard of this beautiful sheet of water? Indian-River oranges and Indian-River pineapples are names familiar to many ears, for these fruits have a national reputation. For three summers the present writer has shipped these delicious pine-apples to Providence, R. I., and the result is, the more they have the more they want.

But Indian River is not a river at all, but an arm of the sea; a rather long arm, to be sure, but an arm nevertheless. One correspondent asked if it emptied into the Gulf of Mexico or the Atlantic Ocean. Much of the time it does not empty anywhere, for the evaporation from its surface more than exhausts the inflow from the land, and the excess of evaporation has to be counterbalanced by an inflow from the Atlantic through its two inlets — Indian-River Inlet and Jupiter Inlet. On most maps, Jupiter is marked "closed," but it is open now, and has been for the last five years. In round numbers, Indian River is 140 miles long. One hundred miles from its northern extremity is Indian-River Inlet; and 40 miles further south, and near its southern extremity, is Jupiter Inlet, in latitude 26° 50′. Twelve miles below Jupiter is Lake-Worth Inlet, which is the entrance to Lake Worth. But Lake Worth is not connected with Indian River. Near the inlets the river rises and falls with the ebb and flow of the tide; but this tidal influence is not felt at all in its northern half, where the water moves only in obedience to the wind. Oysters of the finest quality abound in the tidal regions, and the finest fish throughout its whole length. Nearly the whole of Indian River is in Brevard County, only a small part being in Dade. A little north of the 28th parallel the river widens and divides into the East and West Channels. In this widening, Merritt's Island is located; and on this is our "Island Home." Of the two channels, the east one is called Banana River, and the west one Indian River. The island is about 35 miles long and 7 wide at its widest place. At this point, Indian River west of us is 1¼ miles wide, and Banana River on the east is about 1½ miles wide. Through its entire length, Indian River is nearly parallel to the ocean beach, and separated from the ocean by a strip of land whose general width is from ⅛ to 1½ miles wide; but at Cape Canaveral it widens out to five miles. The trend of the coast in this vicinity is N. N. W., and S. S. E.; and off the cape the Gulf Stream is about 15 miles distant, while at Jupiter it is only about a mile from the coast. There are two small steamers on our river, with the expectation that we shall have a larger one. Sail boats are abundant, and we often see the white wings of ten or more at a single view. The river is our highway, the sail boat our carriage, and the winds our roadsters.

In the multitude of inquiries about Florida that I have received, there is both great diversity and great uniformity. The diversity has appeared in a multitudinous list of subjects. I have answered as many as 40 questions in a single letter. But nearly all inquire about

HEALTH,

the soil, and the price of land. This is as it should be. Health is of the first importance in the selection of a home. Many a man — or, rather, brute — should have the brand of "murderer" upon his forehead for taking his family into a sickly region because he thought he could make more money there than elsewhere. And yet many reach the same end through carelessness that others have done through greed of gain. As I understand them, the facts of the case can be stated in a single sentence. Florida, in point of health, will compare favorably with any other State in the Union; and this eastern coast, from St. Augustine to Biscayne Bay, will compare favorably with the most healthful places in the world. St. Augustine, for more than 100 years, has had such a reputation. Before coming here I had lived in ten different States, and have now spent seven summers and eight winters here, so that, with a fair stock of common sense, I ought to be able to speak understandingly.

Like other States, Florida has localities where sickness at times more or less prevails; but this coast region is remarkably exempt from every thing of the kind. This is also largely true of the Atlantic coast as far north as the trade-winds extend. Within a short time three physicians have been here looking for places for summer homes. They all said that this Indian-River country is unquestionably the most healthful part of Florida. Two of them have places near DeLand, in Volusia Co.; the other one has a valuable grove near Ocala, in Marion County.

There are several climatic conditions upon which this healthfulness depends. 1. Pure air. Much of the year we have easterly winds. These have no malaria in their breath. They come pure from the ocean, with no malarial region intervening. As these winds pass over the State toward the west coast, especially during the hot months, each succeeding mile contributes its quota of noxious vapors; but there are local modifying influences that make the central and western parts of the State comparatively heathful also. The principal of these is, our rainy season is during the hot months. The rain comes in brief showers, with bright clear weather between. Newly fallen water is not malarious. These frequent showers purify the air, and raise the water in lakes and streams, thus covering the muddy margins with newly fallen water, and thereby reducing the malarial emanations to their minimum. And this is the secret of the extreme healthfulness of Florida as compared with many sub-tropical regions.

2. An even temperature is another healthful element in our climatic conditions. Our usual thermal range is from 40° to 90°; our extreme range from 30 to 95. The extreme range of Riverside, in Southern California, is from 23 to 110°, and that of Sacramento, Cal., from 20 to 112°. It may be objected, that our climate is monotonous. I answer, such monotony is both enjoyable and healthful. I know what diversity is, as I have endured all the gradations of cold, from freezing to 79° below, and the gradations of heat, from freezing to 143° above, making a total range of 224 degrees. Our even temperature results from two causes. 1. Remoteness from snow-covered mountain-peaks. 2. Nearness to large bodies of water of a high winter and low summer temperature. The Gulf Stream, just at our elbow on the east, is a great thermal equalizer. There is but a slight variation between its summer and winter temperature; hence the wind from the ocean is but a little warmer in the summer than in winter. East and N. E. winds have always had a bad reputation; but in South Florida they are well-behaved and respectable; even our N. E. storms are never cold, for they come down the Gulf Stream a thousand miles or more.

Some writers tell us of an inshore polar current passing down the coast between the Gulf Stream and the land; but all such statements are entirely false; no such current exists south of Cape Cod.

This is clearly shown by the water temperatures taken at the Signal-Service stations along the coast. The decrease in the water temperature from Norfolk, Va., to New York, a difference in latitude of about 3 degrees, is no greater than from New York to Boston, Mass., with a difference of only one degree in latitude. JAS. H. WHITE.

Island Home, Brevard Co., Fla.

FROM THE BOX-ELDERS.

KEEPING THE BEES IN THE CELLAR UNTIL POLLEN COMES, ETC.

CATCHING our friend Duster on the street one day the latter part of March, we remarked to him that it was a very beautiful day, and that his bees would have a fine frolic in this glorious sunshine.

"Yes, it is a delightful day, and the bees that are out of doors will undoubtedly have a nice fly; but my bees are not out yet," said Mr. Duster. "This soft flood of sun-warmed air that floats about us to-day tempts me to break one of my favorite rules in bee-keeping. It is this: if they will keep still, I will. I shall not put them out of my cellar so long as they keep quiet, or until pollen comes."

"But I thought, Mr. Duster, you used to put them out the first warm days in March, and not return them again to the cellar—feed them rye and oat meal by the bushel—give them something to warm up their bowels, warm honey for instance, and sugar-water sweetened to their tastes, and I was about to say a small tasty button-hole bouquet each as a further inducement for them to breed up early and be ready for work, and so on."

"Yes, yes; we all have our callow days, young man; but we *all* don't know it, which is just as well, perhaps, for some of *us*" (and I thought Mr. D. emphasized the *all* and *us* rather testily), "for there are those who seem to think they know it all—never change, and consequently never learn any thing. I quit this practice of early stimulating years ago; yet in some seasons it worked well; but this was the exception and not the rule with me in this locality."

"You have never given your views," said I to Mr. D., "in any of our talks on

VENTILATION."

"Well, I began to think this ventilation fiend will never down. I am about like all the rest, I suppose. I have my views, and good, strong, stiff ones too; so I'll have at the fiend, and take his head off at the first stroke by saying, I do not believe in upward ventilation at all; that is, speaking of it, or using the word, as we do in lower ventilation. Let me illustrate! If I make mats of unbroken straw, and after placing small sticks on the frames, and putting on the upper story, I press this mat down upon the frames snugly and tightly all around so that no bee can come up—no current of air even, then besides I fill the top story with fine soft leaves like the box-elder, I say a hive prepared this way has no upward ventilation. D'ye see? I say again, prepare a hive with *any* material that complies with this condition of things, and you have one without upward ventilation. D'ye 'hitch on' "?

"But, Mr. Duster, does not the air come up through the mat and leaves with the moisture?"

MR. DUSTER WARMS UP.

"I say, no, not perceptibly to any human sense; not in sufficient quantities to call it ventilation. Why, what do you suppose I have been pressing that mat down all around so carefully and snugly for, and then putting a whole bushel basket full of leaves on top of that, and—and punching them down with my two fists until there is a—a corn on every knuckle I've got, perhaps—hey? Whatever you use to stop the air from passing up, should be an absorbent—not a ventilator of air, but an absorbent of moisture, and I don't care how closely it is pressed in—the closer the better, only so it absorbs freely. I believe if our bees were surrounded in their hives by some material that would take up all inside moisture readily and quickly, that the thickness of our hives would hardly enter into our calculations as regards their safety in wintering."

Here Mr. Duster took another shute.

"Now, suppose we take a Simplicity hive, for example, and prepare it for wintering out of doors by taking out frames at the sides and crowding the bees on to the center combs as much as possible; then slip in a straw mat at each side, close up to the combs; place the large mat the size of the hive on top of all, and bend down this mat over the side mats; fill the top of the hive with fine soft leaves, and sides too, if there is any vacancy; and now *tell* me," said Mr. Duster, almost with a yell, "what do you want a great big awkward double chaff hive for, eh? I do not believe it is the *thickness* of the hive that gives bees the needed protection for wintering, but, rather, its freeness from moisture.

"Now, I prepare my hives much in the way I have told you, and then put them in the cellar, as I would the best hive that ever was made, for these three reasons: First, to save the stores, which it always will, and is a very important item; second, to keep the bees and brood comfortable and warm through the changing spring weather after being put out of doors; and third, to keep the hives free from all moisture. This last reason, when accomplished, solves the problem, in my opinion," said Mr. Duster, with great emphasis, "of all our bee diseases, and likewise our troubles in wintering.

"I know, young man, I have been giving it pretty strong—a full yard, and good width; but that's my way of doing business when I feel sure of what I am talking about; and although we have wandered from the ventilation question somewhat, yet these other matters seem more or less connected with it.

"Talking of straw mats reminds me that we do not hear from friend Muth as much about them as we used to eight or ten years ago; but I will venture to say that he is using them still, and that he nor any other person who has used them ever laid them aside because they were dissatisfied with them; that is the best recommendation I know how to give them.

"But to return to the ventilation question. No; I don't believe in upward ventilation. I think it is all wrong," said Mr. Duster emphatically.

"Well, what about

DOWNWARD VENTILATION?"

"I believe that all the air the bees need should be taken at the bottom of the hive; but I do not think there is much *downward* ventilation about it; but we will not quarrel about terms. I think it should be ample, summer and winter; and yet there is a limit beyond which good common sense should teach us not to go. Let me illustrate: Many years ago I saw a row of hives with cleats nailed on their sides, and hung between posts driven into the ground at each corner of the hive, and on which were nailed strips of boards—the cleats on the hives resting on these strips, and sustaining the hives a foot or so from the ground. There was no alighting-board, no bottom-board whatever. In fact, several of them had comb hanging down six or eight inches below the bottom of the hive, and yet this man's bees wintered. One would almost suppose from this that you could not give too much air at the bottom. While I think, as I have said before, that it is from the bottom of the hive that the bees should receive all needed air and chance for ventilation, yet, because I have succeeded in wintering my cow in some old cold rickety stable, and bringing her through alive just by the skin of her teeth, in spite of wind or weather, is no good reason that it was the best way, and that I should always winter her so. No; there is a reasonable limit, and our judgment in the matter must decide what it shall be." R. H. MELLEN.

Amboy-on-Inlet, Ill., April 2, 1883.

Friend M., next time you see Mr. Duster, tell him that we think it not unlikely he may be obliged to change his opinion once more before he dies. Please notice that he lays great stress on the importance of having bees *dry*. Well, now, our latest developments seem to indicate that we don't want bees dry. Do you not remember how much has been said about the advantages of water for bees, even in the winter?

NOTES AND QUERIES FROM EVERGREEN APIARY.

THE HILL DEVICE, ETC.

MY experience again the past winter confirms the importance of placing over each hive the Hill device. It does away, in my opinion, the old way of boring an unsightly hole through each comb, to give the bees a winter passage. I think if we had a nice round-bottom basket, a bit larger than an ordinary wash-basin, and about as deep, to invert over the bees, it might improve the Hill device.

OUR BASSWOOD HONEY CROP—A CAUTION.

Friend Hasty, will you please just hurry up a little on developing that *short-tube* clover? The way the goodly linden timber in these parts is being destroyed of late, is staring us in the face. It seems that everybody who owns any linn-trees are bent on their extermination. No doubt they little realize, "'tis the goose that lays us the golden egg." By the way, friend Root, if laws are enacted to protect game, fish, etc., for the general welfare of the human race, would not a general uprising, by way of petitions from bee-men to our State Legislatures secure protection to the linden timber? Does not nearly every man, women, and child in America love basswood honey as much as fish or quails? But under the present practice, what is the future prospect of that splendid honey supply?

FOOT-POWER SAWS.

I want to tell everybody who thinks of getting up a foot-power buzz-saw, to try a wheel of an old worn-out Buckeye mower for a drive-wheel. I hit on a combination (partly friend Hutchinson's) by using an old mower-wheel 36 in., by nicely fitting the shaft in babbitt-metal boxing, that almost runs off with itself. You see, there is a great weight to the rim; and besides, there is a heavy cog-wheel near the outer rim that helps to give velocity. The old wheel cost only $1.50.

BEES FOR HONEY.

I want to send this season to queen-breeders in widely separate localities for a few queens, to begin more thoroughly to breed honey-gathering stock. If I had faith or credulity in the Darwinian theory of the law of natural selection, I would begin to set about to develop off the fine point of the sting of our honey-bee. If I could believe that the whale has developed from the cow, and that the boa-constrictor has developed off his legs, I should think the other could be done in a few thousand years.

D. E. BRUBAKER.

Maxwell, Story Co., Ia., April, 1883.

I too, friend B., feel greatly troubled about the way our basswood forests are going, but I don't see how the remedy you suggest is going to avail. Every man has a right to do as he pleases with his basswood-trees, or the fish in his fish-ponds, as it seems to me, and this in spite of any legislation. I have thought seriously of refusing to buy basswood; but then, again, I can't see how this would help the matter very much. Farmers have basswood-trees, and, of course, sell them to the highest bidders. The only hope I can see is in inducing people to plant basswood for both honey and lumber. You know we have made a start in that direction. Since you mention it, I have a strong notion to go down and take a look at our basswood orchard to-day. We have just had a fine rain, and the trees are just in their first leaf; and the sight of 4000 trees at such a time is beautiful, you can well imagine. The way things are going now, I confess that the greater part of us will very soon have to go without basswood honey.

REPORT FROM ONE OF OUR CHICAGO HONEY-MEN.

ALSO SOME HINTS IN REGARD TO HONEY PACKAGES.

I SOLD, of comb-honey crop of 1882, up to the first of January, 1883, nearly 120,000 lbs.; since January 1st to April 1st, sales have been slow, and yet 70,000 lbs. has been disposed of. There is perhaps a few tons of dark and buckwheat comb honey on this market that will not be consumed before the new crop comes into market. There has been three pounds of comb honey crop of 1882 offered in this market, to one of the crop of 1881.

Extracted honey has aggregated in sales 140,000 lbs. There is perhaps a good deal to carry over yet on the market. Prices since the first of December, 1882, have gradually declined until the present date. At this late hour, holders are anxious to sell; hence prices vary very much. Honey has been offered in almost every conceivable shape and style of package. But that which meets with the most demand is the one-pound section; next the 1½-pound section, or frame; and packages containing 25 to 40 lbs. are preferred. One-pound frames of comb honey are as small as this market calls for at present, and none larger than 1⅓-lb. will be taken to any extent, when the smaller can be had.

Extracted honey should be furnished in packages ranging from 10 to 350 lbs.; the smaller packages should be tin; the larger, iron-bound casks and kegs. R. A. BURNETT.

Chicago, Ill., April 2, 1883.

Heads of Grain, From Different Fields.

TEXAS, ETC.

OUR winter has been unusually cold. Our 20 colonies stood out all winter with no more protection than in the summer; lost one weak colony. The first pollen brought in which we noticed was Jan. 27. We have 7 new swarms to date; first swarm came out Mar. 29th. We have 60 single Simplicity hives painted red, green, and yellow. We ordered 50 from P. L. Viallon, of Louisiana, being nearer home, and less freight. Our bees are making honey now rapidly. Both orders for goods from you came promptly, and all right. Thanks for metal-cornered frame. It is good, and we will order after a while. CARNES & FALKNER.

Gonzales, Tex., Apr. 18, 1883.

IS GRANULATED HONEY ALWAYS PURE?

Are not Geo. Grimm, yourself, and, in fact, we bee-men in general, a little fast in stating to the public, as on page 202, that granulated, or "candied" honey is certainly pure? It is my humble opinion that a large per cent of the adulterated honey of the market to-day is granulated hard. The way I came to know so much about adulterating honey is this: Three years ago this spring my bees and pocket were very light in stores, so I sent to Davenport for 50 lbs. of grape sugar; cooked it up with extracted honey, I think about equal parts of each. In about two or three days it was as nice looking candy as I ever saw to feed. I will say here, that I have never had any grape sugar since, and never want any, as I don't think it pays, even to feed in spring. But all that candy wanted to make it delicious (?) honey was a little more water. Honey has been shipped to our market, and sold at an insignificant figure, that looked and tasted (to me) very suspicious. I had our chemical professor of Cornell College inquire what would be the cost of a chemical analysis of a sample of honey. The reply was, "$25.00." As I understand that pure honey contains a per cent of grape sugar, and some grades more than others, I presume that adulteration of this kind would be very hard to prove. What we want is either a simple and reliable test, or else a responsible chemist who will analyze samples at a reasonable price. Can not Prof. Cook, or some one, give us more light?

"BEE-TRAPS."

To those who have trouble in getting bees out of a box, hive, or room, without letting others in. Make a "funnel" of wire cloth. Have the small end just about large enough for a bee to pass, and tack the large end over the exit-hole, and I don't believe there is a bee in the United States that will learn to get in. I have one near the top of each window in my honey-room. I often carry in combs with bees on them, which pass out of the windows without further attention on my part. OLIVER FOSTER.

Mt. Vernon, Linn Co., Iowa.

BRIGHT ANTICIPATION.

I am starting in the bee enterprise this year for the first time, with 15 colonies, all hybrids, and very lively, with both ends too. They began gathering pollen the 12th and a little honey on the 18th. Perhaps you think you will have me in Blasted Hopes this fall, but you will not. With those 15 colonies I am going to make 30, and no more, for which I have made 30 L. hives; with those 30 I am going to take off 200 lbs. each. Do you hear me? This is the best honey country in Illinois. White clover is spread over the face of the earth here like the mantles of snow in the winter; lots of fine timber for honey. Well, you will hear from our "shanty" this fall. We are going to get rich in a year or two, then we will go to Europe and find out how the bees carry the egg from the worker-cell to the new-made queen-cell, and how many bees are employed in the construction of the new cell. Gas is out.

Alta, Ill., April 20, 1883. A. M. CLARK.

ELECTRIC LIGHT AND QUEEN-REARING.

It seems that the problem of controlling the queens mated by the drones becomes solved by the aid of electric light. A German newspaper says: "A certain Mr. Gravenhorst, of Brunswick, a prominent bee-keeper, brought his colonies with virgin queens into large, sufficiently warm rooms, which were lighted with electric light. The bees flew around with perfect ease; they did not fly against windows or walls, and so get killed, as no light from outside shone into the room. He raised, in that way, purely mated queens on a small scale."

REV. SAMUEL KUESTHARDT.

Fair Haven, Mich., March 8, 1883.

I rather think it is a newspaper "yarn," friend K.; but I may be mistaken. Friend Gravenhorst is the best of authority, if there is no mistake about it.

CALIFORNIA, AND HONEY IN CALIFORNIA.

I spent the winter in California, but not in a section where many bees are kept, for I was told that bees near the coast, or around the bay of San Francisco, do not thrive well. I saw but one lot of 30 hives; and as I did not see the owner, I got no information about them. My stopping-place was the city of Oakland, and bees could be seen working on the flowering shrubs until the first of January; after that it was chilly till March 1st.

I visited the establishment of Messrs. Stearns & Smith, honey dealers, of San Francisco. They are gentlemen, and gave me all the information asked for. I saw several grades of honey, both comb and extracted. The sage honey looks very nearly like our white clover, except it has a reddish cast; but the flavor is not, to my taste, equal to the clover. The dark, or fall honey, is very dark, and not very good.

CALIFORNIA SECTIONS.

The sections used here, or all that I saw, were of one size, about 5 inches square, 1¼ inches wide, all nailed: lumber not even planed. The bottom-piece of each section was half-inch square, and nailed in diamond shape, even with the bottom of end-pieces, and, in my humble judgment, are very much behind the times.

Stearns & Smith told me the honey crop for several years had been a small one. Overstocking, he thought, was the principal cause, in connection with sheep-grazing, as they will destroy much of the sage.

Honey at the retail shops sold for 20c. for a well-filled section. The people here will not buy candied honey, and they think it a manufactured article. Stearns & Smith had a large lot of it, and would be glad to sell for 5 c. The canning factories purchase it, melt and can it, and ship it to the Old World.

Our bees have come out through this long winter in fine shape, and good average strength. We commenced the winter with 60, and have 59, losing but one—chaff packed. J. BUTLER.

Jackson, Mich., March 22, 1883.

Thanks, friend B. The section you mention is the old Harbison section. Judging from the number of 1-lb. sections we have sent to California, I should think there ought to a few there somewhere.

SYRIO-ITALIANS.

I think a cross between the Italian and Holy-Land bees the "coming bee." We all know the hybrids are the best, and when we can get hybrids as beautiful and gentle as albinos, and as good honey-gatherers as the dark imported Italians, we ought to be satisfied. A cross between the Italians and Holy-Land bees will do all this.

IS QUEEN-REARING NECESSARILY BAD FOR WINTERING?

I see that you and friend Good attribute your losses to queen-rearing. I do not think that was the cause. Of course, old bees will die; but you did not manage rightly; if you did not have young bees in your queen-rearing nuclei, why did you not let your young queens fill their combs with eggs before selling them? Wait till you see sealed brood, then there will be no danger of selling unfertile queens. And especially toward the end of the season, let them fill their two combs chock full; feed them if they will not do it without, and then three nuclei will make a rousing swarm, and two more heavy combs of honey from other stocks will prepare them for winter when united.

SMOTHERING, ETC.

This is the plan I follow, and we have not lost any the last two years. We used to lose them when our doubled-up swarms were all old bees; we lost one swarm this winter, the strongest swarm we had. The bees had not been used for queen-rearing either; they smothered; they were in a chaff hive, and an ice storm closed the entrance. Our bees gathered natural pollen for the first, day before yesterday. ILA MICHENER.

Low Banks, Monck Co., Ont., Can., Apr. 16, 1883.

Our bees were fed, friend M., and they raised brood in the fall too; but I presume not to the extent they ought to have done. We shall try again another winter, and hope to do better.

REFUSED ADMITTANCE.

I am entitled to a space among the Blasted Hopers. I had 22 stands last fall. I put 6 in a cellar; 3 died; the rest I left on the summer stands; lost 5 of them this spring; lost 2 by robbers. This leaves me to start with 12 this spring, but I will try not to give up hopes yet. A. R. HUNTER.

Adyeville, Ind., April 15, 1883.

Can't let you in, friend H. You have too many bees left; and besides, you haven't got the right sort of spirit for a "Blasted Hoper."

SAFE WINTERING WITH FOREST-LEAVES.

Having now "come safely through the woods," I can consistently send in my report. The past winter has been the most steadily severe of any for the last seventeen years, the thermometer ranging close to zero (sometimes a little below) nearly the whole time. I wintered my bees on their summer stands in standard L. frames, and they had no opportunity to fly from the middle of Nov. till Feb. 17th. In preparing for winter I left seven frames in all hives except one that had but three. I put a two-inch division-board on each side of each hive, covered the frames with a sheet of burlap, and filled an upper story with forest-leaves, giving an entrance of about 4 inches for the bees to fly in or out as they chose; they all came safely through, and to-day are in as good shape and condition as I ever saw bees at this time, and this, too, notwithstanding they were kept on that much-decried shallow standard L. frame.

My belief, gained by seventeen years' experience, is, that with proper precautions in the way of upward ventilation, the L. frame is as safe to winter in as any other; and I prefer to take my experience as my own guide, rather than all the theories that have ever been disclosed; and from my own experience I think I am fully warranted in advising all, and beginners especially, to choose the standard L. frame, no matter what theoretical objections may be made to it. J. E. POND, JR.

Foxboro, Mass., May 3, 1883.

STOPPING UPWARD VENTILATION, ETC.

I have lost 4 swarms out of 12, but have learned a good lesson; that is, I did not spread enough heat-confining substance, such as paper or enameled cloth, over the frames under the cushion. I had only one thickness of woolen cloth on, and a chaff cushion on the ones I lost; but where they had a number of sheets of paper, as did one of them, they came out in splendid order. And another, where I left the summer cloth on, and spread on three woolen cloths and a cushion, they came out far better than all others, and only about half a pint of dead bees; but these were in a chaff hive. I kept all the entrances open only about ¾ of an inch. I also found that the ones that were covered entirely with snow were in better shape than when they were exposed; so in a long run I shall not lose, for I shall learn from such losses. I take lots of pleasure with my bees, and find that by kindness, and yet firmness, they grow more gentle, and they do show so many cunning ways that I don't see how any one can live and not have one swarm at least. I am exceedingly pleased with GLEANINGS. I can read it all night with pleasure and profit.

I have always worked and planned to the best of my ability, and have often been told that I could get a living on a rock; but I rather live on a hive. E. P. CHURCHILL.

North Auburn, Me., April 16, 1883.

Friend C., you may be right in thinking your bees had too much upward ventilation, but so many say they have had experience almost in the contrary way, that I am somewhat loth to agree with you. Is it possible that bees sometimes require much ventilation, and when, in a different state of health, do not require it?

HONEY VINEGAR.

Tell Mr. R. I. Fox, 1 pound of honey and 3 gallons of water will make good vinegar in six weeks. We have made it. Put the honey in water, and put it in a warm place. One teacupful of good apple-cider vinegar will make it fit for use sooner. We got the recipe from the *Rural New Yorker* years ago. I think you are right about not keeping our light under a bushel. I won't for one. HUGH WHITE, JR.

Broad Run, Va., April 24, 1883.

HOW FAR MAY A SWARM GO? FURTHER FACTS.

In your remarks to J. C. Turner, in the May No., you say that "a swarm of bees seldom travels faster than a man can run, do they? say five or six miles per hour. To go 30 miles they would have to fly five or six hours at one continual stretch." In this I think you are mistaken on two points. When a swarm of bees first starts off it generally goes faster than a man can run far. I have seen men who could put five miles an hour behind them, and call it walking; a run would be at least double that, or 10 miles per hour; and as to the continual stretch, did you never know of a swarm of bees clustering after having made considerable flight? Last year a swarm of bees passed over me. I noticed that it was going very slowly, and therefore I followed it. They soon clustered in a large tree; it was then about 5 o'clock in the evening. I made preparations and cut the tree down about sunset, and succeeded in saving the bees. This swarm had evidently taken up for the night, and would no doubt have continued its flight next day. Now, as bees can carry honey enough to last them several days, with this sort of management how far is it possible for them to go? I think 18 or 30 miles either should not surprise us.

I knew of another instance where a swarm was followed 3½ miles, passing over various persons, and the last one said the bees were still going "like a whirlwind." W. H. GREER.

Paris, Henry Co., Tenn., May 7, 1883.

Thank you, friend G. I suppose bees *could* fly 18 miles, or twice that distance, if they wanted to. The point to me was, that it seemed rather improbable that they would want to go so far, especially when loaded down with honey, as you very truthfully suggest they usually are. Now, who can give us more facts in the case? How far have a swarm of bees been really known to go? Let us have some more facts that will, if possible, settle the matter without much chance of mistake.

GRANULATED SUGAR.

I wish to add my testimony in favor of granulated sugar for wintering. I went into winter quarters with 9 full colonies and one three-frame nucleus, all fed on granulated-sugar syrup, as bees did not gather half enough to keep them; 8 colonies were packed in chaff on their summer stands; one was kept in the house, and the nucleus was buried in a clamp. All came through in good condition, with but slight signs of dysentery on the part of two or three.

WINTERING IN CLAMPS.

The one in clamp wintered nicest of all. It was buried 146 days. The combs were dry and clean, and not a particle of mold about them. The piece of ground I buried them in is wet and spouty, so I expected they would die, but was agreeably disappointed after all.

MICE IN CLAMPS.

One feature of the clamp I don't like, and that is, the mice. They got into mine and cut out about a third of a comb. I tried poisoning, but did not succeed in killing them all. I found several dead ones when I opened it. They were tree mice, or the white-bellied kind, and ground-moles. No house mice were about it. Nearly all the bees in this neighborhood died of starvation the past winter. Some have lost all. It was not bad honey, but a scarcity of good. F. S. MCCLELLAND.

New Brighton, Pa., May 1883.

THE BOY'S BEE-FEEDER; AN IMPROVEMENT SUGGESTED.

Let me suggest what I think will be an improvement on the boy's bee-feeder, described in Our Homes for May. Let him make another box, without top or bottom, of thin wood, ⅜ in. smaller each way than the box holding the feed, and just as high as the outside box. Now let him nail a ⅜-in. strip up and down on each side of this box, to keep it in its place when set down into the feed-box. Now, you see that when the wire cloth comes down upon the upper edge of this box, no bees can get over into the sea of feed in the middle of the feed-box and be drowned, and the feed will run under the lower edge of the box, and the bees can take it safely in the narrow space between the two boxes till it is all gone. If the boy will accept this amendment, I think his boy's feeder will beat any man's feeder that I know of, for top feeding. You see, dear Novice, that this arrangement involves the principles of my improved Shuck-Gray feeder, which you described in the last July GLEANINGS, and which you said was "hardly new." Look out, Novice, and don't get into the habit of saying too flippantly, "Oh! that is old." When you classify all your old books and papers to be ready for friend Flick and "sich," just for the curiosity of it tell us the spot where that idea was described before.

GLEANINGS.

Now a word on another subject. I see internal evidence in GLEANINGS that you are "walking around the stairs" a good deal about making it a semi-monthly or weekly, and perhaps it would not be unacceptable to you to know the sentiments of your readers about the change. I for one say, *don't do it.* We all look forward to the coming of GLEANINGS with "great expectations;" and when it comes, we read it through from one end to the other, "ads" and all; but if it should get to coming once a week or so, we might get to treating it as we do the daily paper, or the present weekly bee-papers—just glance them over to see if there is probably any thing new in them, and then lay them aside. To bee-keepers, GLEANINGS, as it is, is one of the great indispensable blessings of life, and we can not afford to risk any changes in such things. It is now inimitable—ahead of all competition; it ought to suit every reasonable man. Let well enough alone. J. HASBROUCK.

Bound Brook, N. J., May 4, 1883.

Thank you, friend H. I didn't mean to intimate that the boy's bee-feeder was new, but I gave it because it illustrated how it helped him, and the point in Home Papers as well. If I am not mistaken, floats are generally used on feeders of that class. Doubtless your plan is an improvement. I always dislike movable floats.—What you say has much truth in it in regard to GLEANINGS; but how about the multitudes who are sending in good communications like your own, which are kept out solely for want of space? I don't know but almost as much matter, and matter equally valuable, is left out of GLEANINGS every month, just because it won't contain it all. Is that well?

A "PIECE" ABOUT FLIES.

Now comes up another trouble; viz., *flies!* House flies they are, too, but they don't in this climate confine themselves to the house alone. They are around the bee-hives, amongst the bees; and although a bee will pounce upon one, capture him, fly away off, and *drop* him, yet I believe the fly beats the bee back to the hive; leastwise, I don't find that they grow anywise "beautifully less." Our climate and soil seem peculiarly prone to the production of this pestiferous plague. They worry me dreadfully. I even hate the sight of them, and they grow so fearfully intimate with one, too! I have exterminated billions of millions of them with a patent "fly-paper;" but as 6 more seem to come in the place of one destroyed, and as this fly-paper is quite costly, 50 cents per dozen sheets, I come to you, or some of your readers, to know what one may do to cheaply get rid of the "varmints." My wife says when she was a girl she knew a family who gathered and boiled a weed, which, when sweetened, the flies ate ravenously and died immediately. She has forgotten this weed, its name, and even appearance. Wouldn't Professor Beal come to our rescue, and tell us something of this valuable weed or plant? This may seem frivolous; but let me tell you it is a serious subject to us, down in this sandy, warm climate, where the flies rear themselves all out of doors by the shipload. If something can not be done, I am either going to emigrate, or swear a terrible vengeance against flies, and devote the best thought for the remainder of my life toward some method of rapidly destroying these infernal marauders. "Sherman's march to the sea" is not a circumstance to this fearful and tormenting incubus. Please help us.

Every time we get into trouble, my better half says, "Well, write and ask Mr. Root what to do."

R. C. TAYLOR.

Wilmington, N. C., May 8, 1883.

I am very much obliged indeed, friend T., to your wife for her great confidence in my ability to help through all ills that flesh is heir to; but I am really afraid that she will be disappointed this time. The idea did suggest itself to me to advise you to move off to where flies did not so congregate; but on second thought, I am inclined to think that such advice would not be just in accordance with my previous teachings. It is my impression, friend T., that there is something in your vicinity that breeds flies of this class, and that your first work would be to stop the production of such undesirable insects. After having seen to this point carefully, I would go on waging the war of extermination. I presume our readers will give you a score of fly-traps, and, very likely, some fly-poison that won't poison bees can be suggested. How is it, friends? what can you do for friend T. and his good wife?

DOES IT PAY TO OBLIGE BEES TO GO 4 TO 6 MILES FOR STORES?

There is something wrong somewhere when beemen write about bees going from four to six miles from choice. My experience is different. Mr. W. D. Hoskins has the second story of a Simplicity hive full of sections; and April 15th, at least 40 of the 1-lb. sections were filled, and bees swarmed—Italians and blacks. Now, the difference between the said apiary and the one belonging to myself is only 1½ miles. Here is what I got: No honey in the hives, bees turning the drones "out to grass," I reckon, and they tore down all queen-cells, and are standing on the alighting-board waiting for me, I suppose, to set mile-posts so they can tell how far they are from home when one goes after honey to the woods. Well, Mr. Hoskins lives close by the woods, and I live 1½ or 2 miles from there in the prairie. I lost 13 colonies last year, and some the year before, and now I am going to sell my farm and shall move to the natural home of the bee, and then—look out!

JOHN W. ROSS.

Velasco, Brazoria Co., Texas, April 25, 1883.

I think you are in the right, friend R. I would much rather have the bees within a mile of the stores, any way.

SETTING BEES OUT OF THE CELLAR.

After reading friend Doolittle's remarks on setting bees out of the cellar (page 250), and your comments on the same, I should like to give you my method, if you will accept of it. All I do is to number both hive and stand; arrange stands so they will be ten in a row, say, and for one hundred colonies, ten rows. Now, when you are carrying a hive out of the cellar, look at the number on it; if it should be, say, 25, go to the third row in the yard, and the fifth stand, and you have the exact place the colony stood the year before, which, I think, is quite important. But suppose, as in Doolittle's plan, you should set No. 25 out anywhere, perhaps on stand No. 5. Now set No. 5 out on any other stand in the yard, and you will find No. 25 will draw from No. 5 a considerable — at least, so I find it; but the way I manage, you can set all or a part out at once, and have no possible trouble.

SWARMS GOING OFF WITHOUT CLUSTERING.

On page 243 you ask if any of us have ever seen a first swarm come out and go right off. Ten years ago, I believe, I was watching the only colony I had, expecting a swarm to issue, and about 9 o'clock it *did* issue, and never stopped to say good-morning either. The timber was about one mile distant in the direction they went. Last season I had a second swarm leave without clustering.

ALSIKE, AND HOW TO SAVE THE SEED.

I should like to trouble you or some of your readers a little further. I have three acres of alsike; it looks splendid, and I should like to save the seed, but don't know how to manage it. Some say, pasture it till June 10th; others say, mow it early for hay, and cut second crop for seed; and still others say, don't touch it until it is ripe. But there is no one about here who really knows how. Will some one tell me how to manage it so as to get the flow of honey from it in the best time for me, and also save the seed?

C. M. GOODSPEED.

Thorn Hill, Onon. Co., N. Y., May 7, 1883.

If you want to save the seed from your alsike clover, friend G., you must not cut it off or pasture it; but if you want hay and honey, and don't care for the seed, you can cut off the first crop just before or while in bloom, and it will blossom a second time, but will give no seed. Pasturing it off will answer much the same as cutting it off. The seed is always saved from the first crop of blossoms; and in order to get seed, you will need to let it stand until the crop is pretty much spoiled for hay. For further particulars, see A B C book.

STINGS.

I believe most of my bees are hybrids, some being brighter than others, and surely the nicest and brightest are the crossest I have; and right here let me say I want some one like yourself to tell how you can handle such without veil, gloves, smoker, and every crevice about your clothing perfectly tight. Why, dear me! they sting right through some heavy gloves I wear, leaving the sting in the gloves, and then pull around, trying their best to *again* sting, occasionally hitting a seam in the glove, and making one think there is a bee inside the glove. Now, I admit these gloves are cumbersome, and miserably in the way; but I for one (a *beginner*, though) can't tolerate these stings; so I'm forced to pull on these detestable gloves, then a pair of old stocking-legs, etc., and you may know the convenience with which I handle frames. It may be I'll get over this glove "biz," but I'm sure it will be after I see the bees cease so viciously stinging them.

A SUBSTITUTE FOR WIRED FRAMES SUGGESTED.

Instead of wiring, I put in the middle of the frame a cross-bar of wood, or, as I nail my frames, I just use an end-bar in the middle. This makes either end about a square, or 9⅛ x 9⅛. The bees will secure combs to sides, and I can't see how the weight of such size can give way, or frame sag in the least. If needs be, these middle pieces can be a little short, and the bottom-bar weaker than top-bar; the short middle-bar will draw the bottom-bar a little crowning, and I think we have a stout nice frame. What sayest thou? J. B. MARSH.

Centre, Ala., April, 1883.

It may be because your bees are hybrids that you have so much trouble with stings; but I think it is because you have not yet got the "hang" of the business. I think you will find times when you can open your hives and handle your bees without the need of gloves, or "stocking-legs," as you speak of. Watch some experienced hand, and see how he manages, and you will very soon learn to get along by the use of smoke, without any gloves or veil either.—Your substitute for the wire frame will answer in a measure, but by no means takes the place of wiring. Your wooden bar will come right in the center of the brood, and your fdn. will sag about as badly as without the bar, although the comb will be less liable to get broken out of the frame. We have demonstrated, by many experiments, that the wires need to be about the distance apart we put them.

THE CORN-SHELLER BUZZ-SAW, AGAIN.

We tried the corn-sheller buzz-saw arrangement, but it took too much "wind" to turn it. We put the belt on the balance-wheel of the sheller and on the saw-pulley. We ran the saw about 600 revolutions per minute. By the way, the saw is homemade, and it may not saw as easily as your "Simons" saws. We have it hitched to our oil-well engine now, but it does not seem to saw as fast as we think it should, and I wanted to ask you a few questions.

SOME QUESTIONS ABOUT BUZZ-SAWS.

1. How many revolutions should a saw make per minute to do the best and most work? 2. What is the fewest number of saws we would need to have to make frames, provided we slotted both ends of end-pieces alike, same as you make the tops of end-pieces now? 3. What sized saw do you prefer for ripping frame stuff, and how fast should a saw run through inch pine lumber? 4. How many teeth should a saw have to the inch, for ripping? and should a cross-cut have more or less? Our mandrel is a ¾-in. iron bolt turned true *by hand*, and run in zinc boxes. The saw, I made of an old hand-saw.

FOUNDATION MADE ON PLASTER PLATES.

I should like a foundation mill, but wax is rather scarce here, and I will try to make the plaster plates do another year. The great objection to them is, it is so disagreeable making, and it takes so much heating the wax, as there is always a sheet of wax on the back of them as well as the face.

Bees have wintered well here. I let one starve, with honey in the hive—a swarm that came out Aug. 23, 1882. JAS. SOMERVILLE, 9.

Brady's Bend, Pa., Mar. 31, 1883.

It is a little difficult to answer your questions, friend S., because you have not given us the diameter of your saws. While a five-inch saw might make 5000 or 6000 revolutions per minute, one 10 inches in diameter would not need to run over 3500, to give the same speed on the diameter where the teeth are. Also, much depends on the kind of work that is to be done, the kind of lumber to be sawed, etc. For dovetailing the ends of frame stuff, you want about four grooving-saws. The whole matter is fully described in the A B C book. For making frames, we prefer saws 8 and 10 inches in diameter, with the points of the teeth about one inch apart, and such a saw should rip frame stuff at the rate of, say, about one yard per second. Small saws, say five or six inches in diameter, usually have teeth about half an inch apart. Cut-off saws usually have about twice as many teeth to the inch as the rip-saws; for fine work, even more than that.

IMPORTANCE OF A CLEANSING FLIGHT IN THE SPRING.

I got a colony of black bees from my brother-in-law, he having 30 all black, and in winter hives, in a bee-house open to the south. This was in March, 1881, about the 15th; they were all seemingly in good condition. I brought mine home, and set them on a summer stand. The second day after, the sun shone very warm, and I took the cap off, and they had a good fly. The next day being warm, I repeated it; they were seemingly strong, though they spotted the snow a good deal. They lived through, while my brother-in-law lost *all* of his. What I want to know is, was it because I gave mine that airing and flying that saved them? My brother-in-law's were not packed, but simply set in a house open to the south. I went into winter quarters last fall with four colonies packed in chaff, and one in a sheltered nook. They have come through all right. On the 12th they were carrying pollen by the basket full.

JAS. BEATON.

Highgate, Kent Co., Ont., Can., April 16, 1883.

Thanks for your report, friend B. Although we have always been pretty well satisfied that it was an advantage for bees to have a good cleansing flight, such as you describe, in early spring, yet we have never before had positive evidence of the benefit of it, such as you give. No doubt but that it was the cleansing flight that saved your bees, and I think it was quite an advantage to have them have such a fly two days in succession. Mr. Langstroth stated, a good many years ago, that it would doubtless pay to remove the top of the hives and let the bees all come out, and have a good fly when a pleasant day afforded a good opportunity, after a long-protracted cold spell.

FROM THE FRIEND WHO DECLINES TO "SERVE" IN BLASTED HOPES. SEE P. 196, APRIL NO.

I received your postal, with five dollars credited. I am surprised that truthfulness about bee-keeping is so rare that it is to be paid for when found. Well, I don't want the five dollars any way. I made a mistake about having only one Italian queen. I introduced a queen last fall (October, I think), and looked into the hive two days after, when I found her on the bottom-board; and a less majestic and more woebegone and frazzled-out looking queen you never saw. Well, sir, she didn't lay an egg through the fall and winter; and shortly after I sent your last communication, I passed the hive, when, presto! every bee was an Italian, so I had two. I divided them when they began to show symptoms of swarming, and so have four. I have saved eight swarms—lost two. Don't forget to send me your photo. I think I can utilize it to scare moths away from my apiary. I'll try, and report. **W. P. LAUGHTER.**

Edna, Jackson Co., Texas, April 14, 1883.

Well, now, friend L., I think that is a little too bad that you are going to use my picture to scare moths away. Am I such an enemy to moths that the bare sight of my picture will cause them to all "get up and dust," just by having it hung in the apiary? It seems to me that you are getting into a better mood than you were when you wrote last. Now, just keep us posted in regard to those four Italian colonies, and may be we shall have you in the Smilery ere long. We send the picture.

FROM 1 TO 8, AND 275 LBS. OF HONEY.

I am like those two A B C scholars in Kansas — a bee-keeper on a small scale. I commenced with one stand of pure Italian bees, presented to me by friend Fox. He also made me a present of one of your A B C books, and by the valuable information gained from it I increased from one to eight stands, and extracted 275 lbs. of honey, and I must say I am perfectly delighted with the bees, and the study of the science of bee culture, and the different opinions presented through GLEANINGS monthly.

Now a few thoughts about the bee industry that has sprung up here, and who brought it about. Friend Fox is entitled to all of the credit; he has created a great interest in bee culture; so much so that we have from the big fish to the little minnow. I tell you, friend Fox is a "whale" among them. Yes, friend Root, he has quit the use of tobacco, so you see that he is a pure man. Pray God that the good work may go on, for there are still more to follow. **C. M. CARR.**

Maysfield, Milam Co., Tex., March 25, 1883.

Thank you, friend C.; but isn't that a rather doubtful compliment you pay your friend, when you call him a "whale"? I am rejoiced to know that you agree with me in the tobacco matter, and that you seem to have caught the spirit of the work.

DO FIRST SWARMS EVER GO OFF WITHOUT CLUSTERING?

I have just finished reading Old Fogy's article on page 242. He seems to believe that, because he never saw a natural swarm come out of the hive, and leave without clustering (or settling), that such a circumstance never occurred. Well, I will give my experience in the matter. About July 1st, 1880, I was at work right by my bee-yard, when I saw a swarm start to come out of their hive. I went up to the hive while the bees were yet coming out (as was my custom), and laid a bunch of grass on top of the hive, so that I could readily go to it after the swarm was hived, to get the number of it to enter on my record (the swarm that came out was a large one, and there is no mistake about its being a first swarm). They circled around, as bees under the circumstances usually do, for about five minutes, when they gathered in a body and took a bee line for the woods, without clustering or alighting at all. I followed them until they got entirely out of my sight and hearing, and kept on the line some time longer, but never found them. **O. E. COOLEY.**

Ridgeway, Iowa, May 9, 1883.

A SUCCESS WITH ARTIFICIAL PASTURAGE.

I took my bees from cellar a few days since, and found them nearly as heavy as when put in, Nov. 25; 109 hives; one light, 6 quite light, the rest from middling to heavy. April 12 and 14 we carried out 107 hives, all alive. A few days after, we found two minus — one without honey, the other with plenty. Our honey is all buckwheat, as they got but little else here last season. I sowed about 40 acres last year, and 45 the year before. It is still cold; freezes hard at night. No pollen yet. Alders are ready, and poplar soon will be. It will take a week for willows yet. **E. G. HOLCOMB.**

Brasher Iron Works, N. Y., Apr. 23, 1883.

BURYING BEES.

The loss in wintering has been very heavy—probably about two-thirds, some losing all they had, others wintering all they had with small loss, and, in some instances, without any. One man packed in chaff all he had, except two, which were very poor, one of them being the bees saved from a bee-tree, a queen being given them, and a few sections of honey fastened into some frames. The two weak colonies were buried entirely beneath the surface of the ground. First a hole was dug some larger than the hives; two 2 x 4 scantling were laid down, and some straw put in. The hives were put in straw placed around them; some boards placed on top of the hives, and then covered a foot deep with earth. The chaff-packed bees perished in mid winter; the ones that were buried were taken out the 15th of April in fair condition. This I know to be a fact, as I went four miles to see the result of this novel experiment in wintering, and helped take them out and carry them to their summer stands.

SUCCESS IN CHAFF PACKING.

I will also tell you how a man succeeded in wintering all his bees by chaff packing. The bees were placed on a platform about 12 inches from the ground; a box was placed around the hive so as to receive about six inches of chaff around the sides, and from 12 to 14 inches on top of the bees, a thin piece of burlap only being between the chaff and bees. A board cover was then put on, sufficient to exclude the rain. The entrances were then contracted to about ¼ the size used in summer. It will be noticed that the packing did not reach the ground, so the bees did not receive any dampness from the earth, as they would if the packing had reached the ground, and there was enough chaff above the hive to retain the heat, and to absorb all the moisture arising from the bees; and as there was no board or cap in the way to retard the dampness, it left the chaff dry at all times. Those bees wintered the best of any I ever saw. I have purchased some of them, and have already transferred a few of them. There is brood in every frame; hives are full of bees, and plenty of drones, which have been flying for ten days. There is a *difference*, I tell you, having the bees in this shape, and in having a mere handful of sickly bees and a queen left, which is generally the result of cellar wintering. S. J. Youngman.

Cato, Montcalm Co., Mich., May 13, 1883.

Friend Y., I am not much surprised at the success of the plan of burying bees. If conditions are all just right, I believe it is a very sure way of wintering. In regard to raising the chaff hive 12 inches from the ground, I can hardly see how this should make any material difference. Our chaff hives are usually set on four half-bricks, and this raises them so that the air can circulate under them, and this preserves the bottom-board from decaying. The idea of having good ventilation above the chaff is also important. The holes in the gable end of the chaff hive ought to be of good size, say not less than 1½ inches in diameter.

THE CARPET-STRETCHER FOR PRESSING FDN. ON TO THE WIRES.

I see you have got a new plan for putting fdn. into wired frames. I think I sent you my plan of fastening last August. The plan you give is so near like it I will tell it again. I take little pieces of tin, and drive into the end of a half-inch pine board. You can have the board go the width of the frame. I prefer it half way. Place your fdn. on a board that your frame will slip over; put on your wired frame; take your piece of board with the tins in the end, and use it as you would your carpet-stretcher. I can put in fdn. faster and better than I can with any thing else. I drive the tins in half an inch apart. Any boy or girl can make one. E. A. Robinson.

Exeter, Maine, May, 1883.

FIRST SWARMS LEAVING WITHOUT CLUSTERING.

In last Gleanings you ask bee-keepers who have seen first swarms leave directly for the woods without clustering, to "stand up and testify." Several years ago I was standing within ten feet of a hive when the bees in it commenced to issue. They came out very rapidly; and seemingly, before all had had time to issue, the swarm started directly off. I followed them quite a distance, far enough to be certain they were bound for the woods. They were the first issue of the first swarm from that hive that season. They came out with greater rapidity than usual. They didn't stop to circle around in the air as usual, but remained directly over the hive until nearly all had issued, then started directly for the woods. They took a course that compelled them to go at least a mile before there were either bushes or trees for them to cluster on. I had another swarm go away under circumstances that made it practically certain that they left without clustering, but I didn't actually see them do so.

HONEY VINEGAR.

Mrs. Harrison wishes some of the sisters to tell about honey vinegar. I don't happen to be a "Sister Bee," but presume Mrs. H. will not object to my having a say on that account. I think the trouble with her vinegar is, that it is yet unripe; that is, not fully made. I have used no other kind than honey vinegar in my family for over ten years past, and wouldn't think a moment of changing it for cider vinegar. This same thing Mrs. H. complains of bothered me at first, until I learned that it takes lots of time to fully make it; since then I have had no trouble. I usually fill up one or more large barrels every year with honey and rain water, and let them stand until the third season, when I usually find it fully made. I have never succeeded in getting good vinegar in less time than the third season. Honey vinegar not fully made has what my family calls a sickish sweet taste that is very unpleasant, especially if used with hot victuals. O. O. Poppleton.

Williamstown, Iowa, May 14, 1883.

DOES THE LOSS OF A LEG IMPAIR A QUEEN'S USEFULNESS, ETC.?

The select tested queen we received of you the 31st of August last, we thought a little dark at first; we tried to introduce her into a stock of pure Italians, made queenless for several days previous, but we made an utter failure, after trying smoke, water, and every other device known to us, to subdue their vindictiveness. Finally, on the seventh day, we rescued her again, minus a leg; caged her and put her in a hybrid nucleus, and after 24 hours we released her, and she was received cordially, and was laying in 24 hours. I raised two nice young queens from her last fall, and they are filling up their hives with beautiful three-banded workers, even brighter than those of their mother, with which I am now well pleased, even if she is to be a life-long cripple.

John Hardin.

Keiths, Noble Co., O., May 15, 1883.

Thanks for your report, friend H. I am glad you did not lose the queen, for you might have decided against her on account of her being so dark. A great portion of the queens we get from Italy are dark; but I believe it is invariably the case that young queens raised from them are much brighter than their mothers, as in your case. I think it is a very good idea to try a queen in another colony, after you have tried so long to introduce her.

SWAPPING A QUEEN FOR GLEANINGS, ETC.

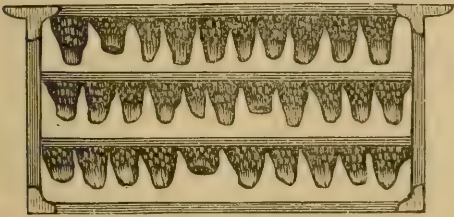
Bro. MacKenzie says, "Why not ship a pretty queen to Novice for Gleanings, beginning with May?" so I have just done it. I have always had lots of queens, but never mailed one; never made a cage until this one; never made any candy until this. I feel a little nervous over the result; but as you acknowledge the receipt at once, I shall not have long to wait, so here it goes. When I read so much about the unfavorable possibilities of early bee cultivation in the Northern and Middle States, I just think we have surely a bee paradise in this climate where we can raise queens in February; no wintering, no spring dwindling, no feeding. For several years I took up Gleanings, and was the first to write you of Mr. Perrine's floating apiary, which I was then building for him. I was much interested in this, to see how it would turn out. I have often been requested to write, as best I might, a history of it all, as I kept posted in all its doings from first to last.

HOW TO GET PLENTY OF CHOICE QUEEN-CELLS.

I showed a bee-man the way I raise queen-cells. The idea comes from the 3-bar frame shown in Gleanings, page 362, for August, 1880, with a reference to page 322 of July, how to raise the best brood for these cells. Nor is it less valuable, since I see you indorse it. I can easily imagine it would be highly appreciated by a host of interested readers, and those who at times make a *try* at raising queens. Would it be too much to ask that we might be favored with seeing it appear in an early number of GLEANINGS? I believe Doolittle, to me the highest authority on all bee-doings, writes in favor of this way of raising queen-cells. ED. NOTLEE.

New Orleans, La., May 2, 1883.

Your queen came to hand in excellent order, friend N. I think you did pretty well for your first attempt.—In regard to again printing the directions for getting good queen-cells, as it appeared as recently as 1880, I hardly think it would be best. Most of our friends can turn to the pages you indicate. However, we give the drawing again, for the benefit of our new readers.



HOW TO RAISE GOOD QUEEN-CELLS.

We would explain to our readers, that queen-cells are obtained as above by putting in two more bottom - bars in your frame, as you see. Strips of comb containing just hatched larvæ are then fastened with wax on the under side of these bars. To get the cells regular distances apart, the surplus larvæ is removed, and the whole hung in the center of a strong queenless colony. The plan is virtually the one given in Alley's new book; and on turning back to the volume for 1880, and reading the descriptions alluded to by friend Notlee, it would seem almost as though Mr. Alley got his plan from this source. Those who have GLEANINGS for 1880 can turn to the pages mentioned above.

IS THE EXTRACTOR TO BLAME?

In looking over GLEANINGS I see so many losing bees in wintering, and I wish those brother bee-keepers would tell us whether they used the extractor or not last summer, as those bees here that had the honey taken from them last summer or fall, and had to fill up their hives with fall honey, have died, or at least lots of them; but those that did not take any out of the brood-frames had splendid luck, some of them not losing any, and giving them no protection, or scarcely any. I think the reason is, the fall honey was not good to winter on. I believe the extractor is a good thing; but I think a person needs to have judgment in using it. The prospect for honey here is good. The fruit-blossoms were abundant, and now the white clover is coming in bloom.

JOHN HASKINS.

Empire Prairie, Mo., May 18, 1883.

Friend H., several years ago, when the extractor was used more extensively than now, there were several surmises that it was to blame for much of the wintering troubles. Now, however, many of the bee-keepers produce comb honey so exclusively that they don't use the extractor at all. Yet these losses in wintering and springing bees are just about as before. I think very likely, however, that many colonies are lost for the reason you mention—that their honey has been taken away, so that they are obliged to fill up with fall stores not as suitable for wintering as the clover and basswood honey.

WHEN TO PUT ON THE BOXES, ETC.

Will you please state how I can tell when I should put boxes on upper stories? Would you recommend beginners (and I am one) to place fdn. in the brood-frames, and in boxes, or would it be well to wait a while until we get more experience? I have but one hive. They are Italians. I bought them of Alfred McMains, Chariton, Iowa. They were out all winter, unprotected, when the thermometer stood 26° below zero. They came out all right. I have had *no* experience in bee-keeping. Having but one stand, I am like a hen with one chicken. I want to be careful, or else I'll get "busted." I have your A B C book, and I think it's splendid, because it aims at making every thing so plain.

I am glad that you are concerned in the moral standing of society, and advise men so invitingly to quit the use of tobacco, with all other kindred evils.

EVAN. B. MORGAN.

Cleveland, Iowa, May 7, 1883.

Nobody can tell you just when to put on your surplus boxes, friend M. It can be determined only by watching the work in the hive. When the bees get every thing full in the brood department, and are beginning to build new bits of comb at the end of the frames, in their desire to occupy more room, then is just the time. Or, better still, have the boxes on a day or two before this time. You don't want to get them on until they are just ready to go right into them. I would recommend *beginners* to use fdn., and they can't well do any harm with it, if they don't do any good, especially if they don't have more than one colony to experiment with. The hen that takes good care of one chicken will probably have more in due time, so I think you are all right where you are.

DO BEES EVER GO OFF WITHOUT CLUSTERING?

Yes, they do when they come out the second time. And that carries me back to my first experience in bee-keeping. In the summer of 1862 I had a swarm issue, and after flying a short time they returned. The next day they again came out, rose up in the air, and left for the woods. I followed them about a mile, and they clustered on a tree 40 feet from the ground. I cut the tree down, and hived the part that I did not kill. They went to work contentedly, and prospered. I have never lost a swarm of bees by absconding, and that was the nearest that I ever came to it. C. H. FRANCE.

Erie, Pa., May 20, 1883.

SWARMS GOING RIGHT OFF, AND NO "MISTAKE."

I had thought, like "Old Fogy," that bees never went away without clustering; but last summer I had one go right off, and did not stop to say good-by either; but I did not see it go. I will let my wife tell how it went. Here it is: "They were partly out when I saw them—perhaps half out; they did not scatter as much as bees usually do, but remained in a body; they did not wait till they were all out, and a great many returned to the hive." But, hold on! may be this is not enough evidence for Old Fogy.

Here sits Jemmie. What say you? "Mother's statement is correct. I saw them go, and they were not long about it either." Now I can give you more testimony that they did go to the woods without clustering, if necessary; but this, I think, is sufficient. I followed the course; they went two miles, and I think I know just where they are, if they did not die last winter. I have two cases of bees getting eggs for queen-cells that were never laid by a queen in their hives. Do you really think they steal them? I have some doubt about it.

Findlay, Ohio, May 15, 1883. D. C. ROUTZON.

We have good evidence, friend R., that bees carry eggs from one comb to another; but the question, whether they ever carry an egg from one hive to another, is not yet established. Many facts seem to indicate that they do; or, at least, eggs are found in hives, and no other explanation can be found as to their presence there. That these eggs are not laid by fertile workers, we know, because they hatch out genuine queens. Who can tell us how they get there?

I have 42 colonies now in good condition; 12 of them have the top stories on, full of nice honey. I lost one during the winter. The imported Italian queen I got of you last fall had 16 dead bees in her cage, and was on the road 5 days. The bees were exceedingly pleased when I turned them loose on the combs, and in 30 minutes were out after water and stores. They are doing well now.

Rape is the only honey-producing plant that will pay to cultivate here, according to my experience. It grows finely and will bring 2 or 3 crops per year when it is seasonable. J. H. RODERICK.

Dodd's City, Texas, Feb. 19, 1883.

TEXAS, ETC.

Are you really two months behind in your work? That is really too bad, Bro. Root. If you don't do better, I don't know but we shall have to have you locked up in one of those fire-proof rooms in that new factory, and give the whole business over to the girls. But please send the extractors just as soon as possible, for my upper stories are all sealed, and I am having to divide my bees in order to get empty frames for them to work on. Texas against the world for honey. JAMES L. WALLER.

Benton, Texas, May 11, 1883.

Thank you, friend W., but I hardly think the girls, or boys either, for that matter, would get on any faster by having your humble servant locked up in the vaults. It is very seldom that we can not send extractors as soon as the order is received. In your case, you did not send the order directly to us, which caused some delay, and it had been gone some time when the above letter reached us. We are very glad indeed to hear that Texas is still against the world.

DRONE OR WORKER FDN. FOR SECTION BOXES. WHICH SHALL WE USE?

Although we have been selling both kinds of thin fdn. for several years, I don't know that we have had any very positive reports as to which is better. I am pretty well satisfied that drone is worked out faster, but several have complained that the queen is more apt to go up into the boxes and start drone brood. Others declare the coarse drone comb does not make the honey as attractive looking as the smaller worker cells. Still, others claim that worker is worked out just as fast, if not faster. Perhaps only one or two have taken this latter ground, however. Here is a friend who is most emphatically in favor of drone comb for starters. Here is what he says:—

Gloves and foundation received all right; but I can't see why you sent *worker*, when I told you I *must* have drone. Now send me 3 lbs. of drone starter or drone fdn. for 1-lb. sections, thin, and nicely nailed up in wood box. Is this plain enough? If I did not say drone before, all right; but if I did, what shall I do with this? I want drone, and must have drone right off, and that must be thin, and fresh made. I am quite sure that I told you drone before, as I would use no other if it were given me.

I started in last winter with 40 stands of bees on summer stands, or in chaff hives. Of course, I have got 40 yet, and shall use chaff hives, for it is cheaper and better than a cellar for wintering bees.

Jackson, Mich., May 5, 1883. W. D. HIGDON.

Friend H., will you please give us your reasons for being so emphatic in wanting drone? No doubt you are right, and I presume you have tried both kinds; but the rest of us want to know about it, you see.

Ladies' Department.

IN your April GLEANINGS, p. 166, is a letter from W. S. G. Mason, which tells my case exactly. All the names are like Latin and Greek when you don't know any thing, and I didn't. I had 3 hives to start with last spring; had 11 swarms and about 200 lbs. of honey; some I doubled up; put ten in the cellar; all came out right but one, which had dysentery, and got so weak the others robbed it while I was from home. All they cost me last summer was $9.37 for hives and honey-boxes. Your bill of necessities looks very formidable.

ARE BEES RESPECTERS OF PERSONS?

I had no smoker, and tried a pan of chips; but I thought the more I smoked them the madder they got. I had a bee-man here last week to look at my hives, and he smoked them very little, and those very bees that would have gone after me like furies seemed just as harmless as house flies. He hunted out the queen and took up the bees in handfuls, and I and the children all around, and every bee seemed to have forgotten that it had a sting.

BEE-KEEPING FOR WOMEN.

I feel as if I wanted to shake hands with Mrs. Harrison for what she says about bee-keeping not being too hard work for women. I am trying it; and if I succeed, others may be encouraged to try. I have partially lost the use of one hand through blood-poisoning. It is over three months since it happened, and I can use only my thumb and first finger. I had my other hand hurt by being thrown out of a buggy, so you see I have two *lame* hands; but I can watch the bees, and do the light work; and when it comes to any thing heavy I can call the boys. The difficulty would be with some, they may not have "the boys" to call. I like tending my bees better than any thing else, and I thought perhaps they had not much honey, and needed feeding; so I and "the boys" weighed the hives, and concluded that those that weighed the heaviest had so much more honey that I fed the lightest.

A week ago I was feeling very much discouraged about my hands, when I saw in the JUVENILE, "Woe unto him that striveth with his Maker." Then I thought, the Lord made my hands; and if he thinks I can work better for him with maimed hands, I am content. "He doeth all things well."

A BEE-WOMAN.

Deanesville, Dane Co., Wis., April 23, 1883.

In regard to bees behaving well when handled by somebody else, I will say, my friend, that I think the difference is in the bees and not in the operator. I remember once when we had such a time with a colony of hybrids that we could hardly go into the garden where their hive stood; and only the next day I went out and opened the hive and took a frame of comb, bees, queen, and all, and carried it into the house and showed it to my wife triumphantly, and told her that they were the same bees that we tried to handle the day before. She exclaimed in astonishment,—

"Do you mean to say that these are the same bees that were so vicious yesterday?"

"I do mean to say that these are the same bees, exactly. Come and see them."

We went and took the frames out of the hive and handled them in every way, and put them back without a sting; whereas, the day before, all the smoking we could give them did not seem to have any effect. I presume the reason was, that honey had begun to come in plentifully, all of a sudden.

I am very glad you liked the little text I quoted. I have sometimes wondered whether these texts that I pick up from month to month every do anybody else as much good as they do myself when I find them. I am rejoiced to see that you get the spirit exactly, of the one I quoted.

I will let you know how Oregon is to-day; but just bear in mind that you were mistaken when you supposed me a juvenile.

WILLOW HONEY.

Father's bees began working on willow bloom the 9th of January, and they are at it yet. For three weeks past we have had very warm weather; the cherries, peaches, and plums are beginning to bloom now, so the little pets have all they can do. Father looked through them this morning, and they have lots of honey already. The honey from the willow has a slightly bitter twang, just enough to give it tone. It is more like horehound candy than any thing else. We have the "evergreen" blackberry, and it is a famous honey-plant; begins to bloom in the latter part of April, and the bees work on it till the last berry is gone, which is late in August.

I suppose you are terribly bothered with such long letters. I am a passionate lover of pets, but I am not a juvenile.

OREGON ON THE TEMPERANCE QUESTION.

I must tell you, the only saloon in our little village is closed. The keeper said he would have to do something else, because he couldn't make a living at that. There is a strong Good Templars' lodge, a Band of Hope, and a Sunday-school here, and we all fight alcohol.

A. M. HALL.

Beaverton, Oregon, March 17, 1883.

Well, my good friend "A. M.," if you aren't a juvenile, I think you must belong in this department; I will try it, any way. May God's blessing rest on the community that obliged the saloon-keeper to try something else for a living.

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

I INCLOSE you ten cents more, for which please send me that number of GLEANINGS that contains Mitchell's "patent claims." It was published several years ago, if I am not mistaken. Mitchell has an agent here who claims to have a patent on some kind of a division-board.

CHAS. F. UPHAUS.

Batesville, Ripley Co., Ind., April 23, 1883.

Mitchell and his division-board has been for years our old standby in this department. People are getting so generally posted, however, that he of late has found few localities where his patent swindle would work. We published his claim in July number for 1878, which we send you. Tell the agent you mention that he will get himself a very bad reputation by having any thing to do with Mitchell or his division-board. The matter has been fully ventilated at least a dozen times in the past eight or ten years.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

MY first year's subscription to GLEANINGS has expired, and now the question is before me: Must I give up GLEANINGS, with all its friendly associations? Must I no longer read of D. A. Jones, Doolittle, Hutchinson, and many others whose names have become dear to me through the reliable pages of this noble journal, all for the sake of one dollar? And then there is the JUVENILE, so sweet and childlike. Why is it that GLEANINGS has done so much, and JUVENILE promises so fair? Friend Root, your own self has done the work. Go on with your good work; keep up your tobacco department, as it concerns me deeply. I have been smoking for 20 years; have 4 little children who see my example. Well, I must be going; put me down in the Blasted Hopes as a bee-keeper, and I will smoke on "for this time."

A. P. STAIR.

Whitney, Ala., April, 1883.

Well, I declare, friend S., your kind letter wound up a little unexpectedly. In some way it seems to remind me of our recent Sunday-school lesson. Are you sure you are not "kicking against the pricks" just a little? Your conscience is accusing you, I should think, from your own admission. Rise up, old friend, and come along with the juveniles. Surely you don't mean to go on setting a bad example before their little eyes, do you?

Notes and Queries.

HOW IS THAT FOR CONNECTICUT?

I HAD a swarm come out the 16th of May. Apple-trees will not bloom for about one week yet. Bees wintered with but little loss, in this part of the State. They are more than two weeks ahead of last year. E. H. COOK.

Andover, Ct., May 18, 1883.

CELLAR AND SUB-EARTH VENTILATION.

I wintered 115 out of 116 in cellar — sub-earth. See Aug. GLEANINGS, 1882. F. H. CYRENIUS.

Scriba, N. Y., May 14, 1883.

In May GLEANINGS, p. 249, in editorial note on willow, change *kilm mark* to *Kilmarnock*.

New York, May 7, 1883. JOHN PHIN.

[Thanks, friend P.]

A GOOD REPORT FOR THE ZINC HONEY-BOARDS.

The zinc honey-boards *will do.* Lots of honey, and no brood in upper stories. F. N. WILDER.

Forsyth, Ga., May 7, 1883.

I increased the one stand I bought of you last spring to six, and got 26 lbs. honey, and sold out at $40.00 profit. A. I. PARK.

Concordia, Mead Co., Ky., April 20, 1883.

Bees are boiling over, but no honey coming in; feeding 100 colonies is quite a job, but it must be done, to keep the bees out of mischief.

Luling, Texas, Apr. 21, 1883. J. S. TADLOCK.

I have never known bees to gather so much honey from fruit-bloom. My best colonies are literally full of brood and honey, and have queen-cells containing eggs preparatory to swarming.

Washington, Pa., May 12, 1883. L. W. VANKIRK.

Bees are doing finely now; they have made such a rush for the boxes the past 3 or 4 days, it makes one feel happy who had to feed them three or four weeks to keep them alive. W. S. CAUTHEN.

Pleasant Hill, S. C., Apr. 21, 1883.

In the May No. you ask those who have known bees to leave for the woods without clustering, to *rise up*. We had one last summer that left for the woods as soon as they were out of the hive.

MRS. A. P. STANBRO.

Clyde, Oak. Co., Mich., May 12, 1883.

COMBS FULL OF HONEY.

I am in a quandary. I have a great deal of surplus honey taken from hives last fall in combs, and I do not think they will need much if any of it. I use no extractor with my hive; run for box honey. What do you advise to do with it? WM. M. YOUNG.

Nevada, O., May 12, 1883.

[See page 336, friend Y., for an answer.]

THE BAD WEATHER, ETC.

Storms all around. A great destruction of life and property. A severe frost last night, badly injuring small fruits. The pastures and roadsides were beginning to whiten with clover. It is all killed. The air is heavy with the smell of frost-bitten vegetation. I shall have to feed my young colonies for some days, as the bloom is all destroyed.

Marissa, Ill., May 22, 1883. WM. LITTLE.

[I think you are borrowing trouble a little, friend L. Feed liberally, and make up for break in honey yield.]

GOOD FOR ARKANSAS.

D. A. Sailor, of Clear Lake, Pulaski Co., this State, 20 miles north of here, got 1200 lbs. of comb honey in sections, all filled, and some more unfinished ones, which he used at home from 10 stands in the spring, and increased to 30 stands of bees.

GEO. E. LYTLE.

Flat Bayou, Jeff. Co., Ark., April 19, 1883.

FROM 4 TO 11, AND 350 LBS. OF HONEY.

I began in spring of 1882 with 4 colonies; increased to 11 by natural swarming, and took 350 lbs. surplus honey in comb, nearly all in sections; wintered on summer stands in single-wall hives. All came through safe, and answer to call to-day.

Minier, Ill., May 19, 1883. WM. M. BISHOP.

TWO QUEENS IN A HIVE.

I united two stocks last fall. The two queens were working together in harmony on the 15th of this month. I saw them rub together.

ALEX. MCKECHNIE.

Angus, Ont., Can., April 26, 1883.

[Well, I should think that was close enough for all practical purposes, friend M. We should like a whole hive full of just such. Who can supply them?]

DEAD BEES UNDER THE WILLOWS.

Bees are working nicely on fruit-bloom and willows; but under the willows large numbers lie dead. Have any other cases been reported, and do you know the cause?

FROM 2 TO 8, AND ——

I commenced with two swarms in the spring of 1882; increased to eight, which I wintered without loss, in a cellar. JOSEPH S. SECCOMB.

Auburn, N. Y., May 21, 1883.

[Don't know, unless it was the cold rains that killed them. Willows are not poison, are they?]

SMILERY.

Don't you think I can speak for one little corner of the Smilery? I can say, smilingly, that I believe I have the first natural swarm of hybrids, or any other kind of bees, in Pennsylvania. They issued on the 18th day of May. My wife had them in a new hive five minutes after they had clustered. If any of your readers can boast of an earlier swarm, let them speak out. WM. F. GEIGER.

Beatty, Westm. Co., Pa., May 19, 1883.

[I am glad to see you smile, friend G.; but Pennsylvania is a pretty large State, and it may turn out that somebody else has had a natural swarm before you, especially when this comes in print to call them out.]

SWARMING WITHOUT CLUSTERING; ANOTHER "CLINCHER."

In May GLEANINGS, page 242, "Old Fogy" has settled it to his own satisfaction, that bees never swarm out without settling or alighting on some tree or place of some kind. Now, I will state, for his and others' information, that on Sunday, June 25, 1882, my wife and I were sitting near our apiary, when all of a sudden the bees commenced to swarm out of a hive, and in less than two minutes they struck a bee line for the nearest woods. I tried to follow them, but could not, as they went too fast. So I took their course and followed them about one mile, and found them going into a large oak-tree. So we can say we saw a swarm go off without clustering. If you think worth while to publish this, you may.

ELIAS HERSHEY.

Leaman Place, Pa., May 21, 1883.

Our Homes.

DEAR friends, I take pleasure in giving you a sermon preached several weeks ago by my good friend and fellow-worker, Mr. C. J. Ryder, of Medina, Ohio. You will observe how nearly his line of thought runs with the Home Papers I have been giving you for a month or two past.

I pray not that thou shouldst take them out of the world, but that thou shouldst keep them from the evil.—JOHN 17:15.

"A good sermon, that," said a man to his neighbor when returning from one of our city churches, where they had listened to a sermon on the Christian duty of not being conformed to this world.

"Yes, it was a good sermon enough," replied the one to the other, "but somehow these requirements of the Bible in that matter are impracticable for a man in business or society. It was all right for *him* to speak as he did; he is a minister of religion; but this thing can not be carried out in practical life."

What this man said, many others think. The ideas of the Bible seem beyond the possibilities of every-day life. The rank and file of men may look at these bright spots in the moral sky as they look at the stars at night—admiring them, but never dreaming of possessing them. A poet leaning over a ship's-rail at night sang these words:—

Five thousand stars are in the sky,
Ten thousand in the sea;
And every wave with dimpled cheek
  That leaps into the air
Has caught a star in its embrace,
  And holds it trembling there.

So of these moral stars in the galaxy of the Bible, even if they reflect in the troubled sea of life around men, they are held only by the liquid fingers of the waves. Too far away these high ideals of the Christian life seem. But they ought not to be far away. The Christian is to be found in the world. He is to be a Christian in the world. The gospel is meant for busy men. No new version of the Scripture suited to the possibilities of every-day life in this 19th century is needed. The old version is intended for these very possibilities. This text gives us the *where* and *how* of the Christian life. The first is a guideboard, pointing out the road; the second is the wagon in which to travel. It is not a carriage, with rich upholstered cushions, nor is it an ambulance with a soft couch; it is the plain old wagon of Christian endeavor. Peter and John jolted over the road in it, Paul traveled in it; Luther and Calvin and Knox and Finney—every earnest Christian, in every age, has ridden in this same old wagon of Christian endeavor. No soul was ever "carried to the skies on flowery beds of ease." The sky to which a soul came in that way would be that of æsthetic sentimentalism, not the heaven of the Scripture. The soul that wanted to travel on a bed would better be taken to a spiritual hospital for treatment, than to heaven for lazy enjoyment. It is in the midst of this busy world that the follower of Christ is to be found.

This text locates the Christian. "I pray not that thou shouldst take them out of the world." These words of the Savior put the Christian in the world; that's his place. Christians are to be followers of Christ. What value would there have been in Christ's life if it had been spent in the cell of a monk on Mount Hermon or Tabor? Our Savior found his work among men. Seclusion is often cowardice, not sanctitude. Ignorance of what we ought to know is not virtue. Paul could reason with the cultured Athenians, reaching them through his familiarity with their "own poets." If we can find a common theme between them and ourselves, the way is open at once for presenting Christ as Paul did. A Christian, after reading the Bible, took up a daily paper, saying, "Now let me see how God is governing this world, and which of his promises he is fulfilling among the nations to-day." We can not neglect the world's work, its thoughts, its sorrows, its hopes, if we are really intent on following Christ. In olden times men were familiar with the affairs of their neighbors in their own school-district, but what an enormous school-district we live in, in these days! There are mother Bull's boys just across the pond in England; beyond them, the jabbering German lads, and the fun-loving French boys. The sons of the old lady that has built a stone wall all around her lot, to keep out the children, are well known to us. There is only one family in this great school-district of the world with whom we are unfamiliar, and that is the black family of Africa. They live in an unhealthful neighborhood. How near we stand to the heart of the world! We touch the throbbing pulse in the telegraph; we listen to its measured breathing in the puffing steam of locomotive or ship; we think with the world; individualism is giving place, perhaps too largely, to socialism. It is in this world, busy, eager, restless, that Christ has put us.

The Christian's place is in the closet of secret prayer; it is at the family altar; it is in the sanctuary of public worship; but it is also in the busy market on the street; in the office or store. "I pray not that thou shouldst take them out of the world," was the best request that Christ could offer for us. He made no mistake. Not only for the sake of the world, but also for the sake of his followers, the world is the best place for them.

It is said, that in Mexico there is a marked difference between those living in the mountains and those living in the lowlands. The mountaineers are strong, vigorous, active. They are intelligent beyond their lowland neighbors. The reason for this is evident. The mountaineers must work for their bread. In the lowlands, food grows around them with scarcely an effort. We need Christian mountaineers — those whose spiritual sinews are made strong by hard toil; those who have climbed the heights of Christian experience in the face of a mountain gale. Spiritual strength comes as physical strength comes — by meeting and overcoming opposition. Lowland Christians who live on the self-produced fruits of tropical growth never do any thing to feed others. They are like a queen bee: you must put them in a colony of workers, or they will starve to death.

Take a map of the world, and put the pointer on the thought-centers; where are they? The United States, with only the thumb of one hand and the tip of one finger reaching below the 30th parallel of north latitude. Look at Europe; where are the centers of thought and of action there? England. But Lizard's Point is only just down to the line that cuts Canada from the United States. Germany, which holds in her hands the destinies of Europe, has every inch of her area north of the 45th parallel.

As I take it, there is a great spiritual lesson in this map of the world. What does it say to us? It says that ice and snow and cold make men rugged; that a struggle to live makes men worth living. Men who work with brain or hand against odds grow strong, and turn the currents of the world's life and history. Christian life developed in the midst of hardships is rugged.

One danger which seems to threaten religious progress to-day is the absence of real hardship in Christ's service. Christ's side is fast becoming the popular side; men see that it is to be the winning side. Science has advanced with tremendous strides during the last hundred years; but religion has taken two steps to her one. In 1800 there was one Christian in 14; in 1880, one Christian in 5. Statistics which seem to be accurate give the number of Christians in the world at more than 400,000,000, against half that many in 1800, which means that there have been more conversions to Christ in the past 80 years than occurred during the 1800 years previous. There is great encouragement in these figures, written on the dial of God's providence.

But there is danger in them too. Religion is gaining almost entire control of our schools of higher education. Take one fact: During the last fifty years, the Christian colleges in America have increased tenfold; other colleges, three and one-half fold. The students in Christian colleges in 1880 were 70 per cent of the entire number. In other colleges, 30 per cent. To-day the numbers from Christian colleges have increased from 70 to 83 per cent, and those in other colleges have fallen off from 30 to 17 per cent. At this rate Christianity will monopolize all the schools of higher training within a few years. The very air is vocal with the fulfillment of prophecy, "I will overturn, overturn, overturn it, * * * until he come whose right it is, and I will give it him" (Eze. 21:27). He is coming. Men begin to realize it. It will be just as successful to "lift up a puny, human hand against him in the day of judgment," as it is to-day. One might as well attempt to dam Niagara with feathers, as to stop the progress of this on-coming kingdom of righteousness. But the final victory will come through the God-directed efforts of the mountaineers in Christian life — those who live well up to the north. Christ knew the dangers of success as well as of opposition, and yet he offered this prayer for us: "I pray not that thou shouldst take them out of the world." Every legitimate occupation is an open door for Christian usefulness. If you are in a shop or store, you may reach those whom others fail to reach. You meet the same companions daily. Your work unites you. You learn their life's history, bit by bit. You have common temptations. The Lord has placed you in this little world; *there* is your Christian work, as truly as your daily task. Be ambitious to rise; fit yourself for a larger field; but do the best Christian work possible, where you are.

There is a second part to this text. The Savior not only prayed that his followers might be left in the world; but that they might be kept from the evil. The world is evil, as truly as it is busy. It is not the work of Christians to bring the standards of righteousness, which God has given us, down to men, but to lift men up to these standards. The object of revelation is to present motives which shall keep us from sin. This prayer of Christ is not a petition for the impossible. The Savior meant just what he said—"keep them from the evil." This very standard of righteousness is possible, because it is the Lord's standard. His strength is promised his followers. The disciples were not to be kept by supernatural power, granted in some miraculous way, but through their faith in their Lord's help and promises, and their own plain Christian endeavor. It was only as they put themselves into God's hands, and strove earnestly to keep his commandments, that they fulfilled the conditions of being kept. The life-boat saves a ship's crew from drowning. They would have gone down with the wreck but for the life-boat; they would have gone down notwithstanding the boat, had they refused to get into the boat. "He who does the will of the Father, shall know of the doctrine." If we pray, "Lead us not into temptation," and then run where temptation is, we can not honestly add, "deliver us from evil."

The Lord uses means which are not at variance with our nature. He keeps us by awakening love in our hearts toward him. What does love do? It leads us to imitate those whom we love. The resemblance is often surprising between those who have spent years of happy married life together. They grow even to look alike. Love imitates its object. So those who love Christ unconsciously imitate him. They grow more and more like him. This imitative power of love is one of the means which God uses to keep us from the evil of the world. But love also seeks to please the one upon whom it rests. Sacrifices are readily made, that the person loved may be gratified.

A recent writer has said, "The enthusiasm of love, directed by good sense and sustained by holy principle, has made men victors in the severest trials, as they have grasped the banner and pressed forward in the name of the Lord." There is, then, this unconscious imitation of Christ, and there is also the voluntary effort to please Christ; this twofold power of love which reaches us in the world.

These are by no means the only methods which the heavenly Father uses in answering Christ's prayer; but I desire particularly to emphasize this power of the love for Christ in keeping us from evil. If we can only grasp this thought; if we can only have in our hearts this love, it will hold us amid the temptations of life as a needle is held to the pole.

In conclusion, let me say that this scripture teaches that Christians are not to seek escape from the hardships of life by retirement. Their place is among men. The gospel is for those who are busy. Its very object is to keep busy men from the evil which is in the world. It is powerful, because it presents the powerful love of Christ, and awakens a corresponding love in the soul. Paul stood on a rock in the midst of the tossing sea of uncertainties and temptation when he could honestly say, "Nay, in all these things are we more than conquerors through him that loved us; for I am persuaded, that neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature, shall be able to separate us from the love of God which is in Christ Jesus our Lord."

There you have it, friends; God wants you right in this busy world, probably right where you are now. That is, so far as outside things are concerned. Of course, he does not want you among any sin and wickedness that is of your own making, but he wants you to battle manfully with the sin and evil of the world. Are you on that rock on which Paul stood? Do you feel every day that, through God's guidance, you can say you are *more* than conqueror? Do you ever get discouraged? A Christian ought not to get discouraged, for this is God's part of it. Your part is to do hopefully the best you can with the world as you find it. It is bad to get into a faultfinding way with the world. It is bad to find fault with such friends as God has given you; with your neighbors and surroundings. Do you not know you can cultivate a way of objecting to every thing you meet? And then you can also cultivate a way of receiving, pleasantly and thankfully, every thing you meet. I think I shall have to tell you a little story here. I may have told it before, but it will bear telling again, and perhaps I shall tell it a good many times before I die. It is this: Two men were just about stopping work for the night. One of them said he must hurry home, or his wife would scold him, because he had kept supper waiting. The other remarked, as he passed along, that he never heard his wife scold, and that he would like to hear her, just for the novelty of the thing. Said his neighbor,—

"You would like to hear her scold, would you? Well, I can tell you how. Just get her a load of crooked wood. Nothing in the world will make my wife scold so as crooked wood."

Said the other, "Well, I believe I will try it, just for the fun of it."

Accordingly, when he was sorting his next wood, he took pains to procure a load of crooked sticks. In fact, he picked out the worst-shaped wood he could find, and quietly laid it in the usual place, saying nothing, but awaiting the result. Nothing was said, however, until the wood was nearly used up, when his wife said pleasantly, one evening,—

"Husband, our wood is almost gone; and if you have any more like the last, I should really like it—*the crooked sticks fit around the pots and kettles so nicely.*"

Do you get the idea, friends? God is sending you wood, or material for your work, if you choose. He sends you friends, neighbors, and companions and helpers, and you can look at them as "crooked sticks," if you like. I wonder if any one ever did have the temptation to think God had put him into the world among a lot of crooked people. Do you feel that way, my friends? If you do, I am inclined to think it was Satan who whispered such thoughts into your ear. Don't ever let them come again. Think, rather, that what you see that looks crooked, God sent in his wise providence to be a help to you, if you will only take it so. Take the crooked sticks and use them as best you can, and they will help you on in your work to build a Christian character. You will be better off for having had the crooked and rugged paths to walk in; and possibly God has given you a faculty for making straight much of the crookedness you find, if you set about it with a prayer to him to help you. Think how that good woman took the load of crooked wood. I think she must have been a Christion—don't you think so? I suppose she looked on that load of crooked wood smilingly, at the outset. She knew her husband brought it, and she knew, too, that he loved her as no one else loved her in this world, and therefore it must be right for her to have it. With the assurance of his love in her heart, she accepted the wood, even though it was different from any she had ever had before, and it proved a blessing. In the same way we are to bear in mind that it is a kind Father who loves *us*, who gave us these trials. You know how differently we look at things at different times, friends. Different people, also, have different ways of looking at things. Some are always pleased, and others are always displeased. Which class do you belong to? Of course, you know I don't mean that we should let every thing pass just as we find it; for the great battle in life is to make right the things that are wrong. Wrong meets us at every step. Sin and evil meet us everywhere. We hear profanity on the streets. While it is a grievous sin in the sight of God, yet it is so; and while the sound of it calls on us loudly to wake up and stir ourselves in the cause of Christianity and right, yet we may be the better Christians for having met these trials. The effort it costs us to reprove the one who takes God's name in vain (in a way that will make him a friend of ours, and not an enemy) brings with it a blessing. Did you ever try it, my friends? and have you never learned that even the worst blasphemer may be reached in such a way as to induce him to do better (if not cease entirely) if you go about it in the right way? Many and many a time have I felt that I should like to be spared from such encounters. I have felt that it would be such a privilege, if I could be in a community where there was no swearing or intemperance; yet if there were such communities, would it be best for all the Christian people to move there? What would become of the world? What would become of the boys on the street, were there no one near or on hand to reprove and plead with them? How does it come, think you, that Christian people are scattered so evenly over our land? Take a look abroad at the world. There is not a neighborhood or a community that does not contain some good earnest Christian. Here and there they are sprinkled over, as if God, in his providence, had purposely placed them there, for a kind of light-house, as it were, to give warning, and to encourage and lend a helping hand to others who are striving for right. Is this all accidental, think you? Suppose it were otherwise. What would the world be, if each of these old "wheel-horses" in the cause of Christ should give up in discouragement, and move away? Suppose they should want to get out of the world, instead of living in it. A few months ago I had quite a talk with you about those who wanted to get out of the world, or who slipped off life with its cares and trials and responsibilities. What do you think of such? Is it not a pleasant thought, friends, that Jesus prayed that we should not be taken out of the world? And is it not a wicked thought for us to cherish any lingering desires to leave the world, and leave the place of usefulness where God has placed us, before he is ready?

Of course, we are not to sit still in the world, and let it go. There would be no virtue in that. We are to be as watchmen, as sentinels. We are to be faithful, also remembering the promise to those who are faithful in a few things. There is a promise, you remember, to those who are faithful in so little a thing as a cup of cold water. God sees and remembers.

A good many times I get letters from beemen, asking me if I would not advise them to move somewhere else. Now, while I think it is right, and perhaps among one of God's plans that people should move about, and fill up vacant places, and go abroad into new countries, still I have a sort of feeling that there is a good deal of moving about that comes from a longing to find some easier place, or to get somewhere where we should be excused from responsibilities that now surround us. Many times it comes from a desire to try something different, or to have a change. Several are now talking of going to Florida. My advice has been asked in the matter many times. As a general thing, I don't believe I would advise it. When young people get married, let them go off and start in some new country, and build up a new home, and make the foundation for new towns and new railroads, if they choose; but I don't believe it is well for elderly people to move about very much. Do you know that such changes are expensive, dear friends? Do you know by experience what it costs to tear up and cut loose in one neighborhood, and commence in another? To those contemplating moving, I would ask, first, why do you move? Is it that you may find some place easier for yourself, or is it that you are seeking God and his righteousness? or, in other words, because you think there is a place where you think you can do more good than where you are?

You know, friends, I am getting to be a little along in life. By one of God's providences it has been my lot almost all through life so far, to see boys and girls start out in life. Those who came to me years ago, saying, "Please, Mr. Root, can't you give me some work?" are now, many of them, heads of families, and their children come asking for work in the same way that they did. Many that I have had in my employ have risen to posts of great usefulness. A few have gone down, as it were. One or two fill drunkards' graves. While I say it, I say it sadly. What makes this difference? I have learned by experience which young man or young woman will rise in the world, and occupy posts of usefulness, or, at least, I think I can tell something about it; and when I tell you a little of my experience here, please bear in mind I do so solely to illustrate one of the truths in our little text of to-day. Those succeed almost invariably, who take hold of the world, and the work and the people they meet, with cheerfulness and courage. One young man wrote to me some little time ago, and asked me if I could give him a place to learn bee-keeping. When I asked him what wages he would expect, he replied that he was willing to let me give him just exactly what I found him worth, but that he would like enough to pay his board. He was educated and intelligent. I presume he had a purpose of making himself so useful that he would get reasonable pay. I paid him about enough to pay his board, for perhaps two weeks. At the end of that time I told him one day that I felt ashamed to pay a boy so little, who could accomplish so much, and gave him about the wages of a man. In a few weeks, however, his pay was increased again, and so it has been from time to time, until he gets now very nearly as much as any man in my employ. One especially valuable trait with this young man was, that he never found fault with any thing or anybody. He took our work and our people (and your humble servant, perhaps) exactly as the woman took the load of crooked stovewood. In such a factory as ours, with so many people, and all sorts of people, of different ages and habits, of course we have many disagreements. One of our greatest causes of disagreement is the matter of pay. A few days ago one of our town boys met me and asked the oft-repeated question,—

"Mr. Root, haven't you a job for me?"

"But, D., you use tobacco."

"Well, if I give it up, you will give me work, won't you?"

"Yes, so far as the tobacco is concerned, D.; but there is another thing that comes in our way. When you worked for us last, we couldn't agree about the pay. You were dissatisfied with what we thought you fairly earned. Shall we not have the same troubles now with you, or, in other words, will you be willing to go to work for what I think I can afford to pay?"

"Why, Mr. Root, it doesn't seem as if you did do quite as well with me as you did with the others when I was there last. Of course, I want a fair chance with the other boys."

You see, friends, there was a difference of opinion. I arranged it in this way:—

"Look here, D., you know Mr. W., the foreman of the saw-room, and you know, too, that he is a good, fair man, and likes the boys."

"Yes, I know Mr. W., and he is a nice man."

"Well, D., you are to go to work under him. We will have it this way: I will pay you whatever he says you are worth, and your actions and your work shall fix the pay. Won't that be fair?"

"Yes, that will be fair, and all right."

This fixed the matter pleasantly, you see, for the boy was to let his actions speak, and he was to agree to abide by the verdict of these actions. A good many times I tell the friends who work for me, when they are complaining that they have not been used well, to make no reply, only by actions. Let their *lives* do the talking. If they have been wronged, let the lives they lead day by day answer the wrongs, and refute them.

Many of you have, perhaps, read the life of Mueller. You will remember that quite early in his great work he formed a plan of letting the world pay him what it chose; in other words, having no salary, even when he was a minister. He asked God daily for things he wanted, but never asked any thing from mankind. In fact, when asked once if he needed money for his work for the orphans, he declined to answer. Mueller was in the world, and through the world he saw

God; and as he trusted God, he also trusted humanity. You know the result. The world has poured millions of dollars into his hands, and yet he never solicited a copper. God has placed us in the world. He wishes us to love the world, and trust the world — recognize the world as a blessing and a great gift. Even though crooked, we are to take it thankfully. Are we doing it, my friends?

I pray not that thou shouldst take them out of the world, but that thou shouldst keep them from the evil.

Tobacco Column.

A MINISTER TAKES A SMOKER.

When I get a smoker I shall lay away my big meerschaum. To-day I was with Mr. H. Waughtel, and he was smoking. He is hale and hearty. I said, "Uncle Henry, it is about time to quit the pipe too."

"Well, Will, I would if it were not for my bees."

So I offered to furnish the smoker if he would quit, and he agreed to do so. You may accordingly mail him one. I would advise you to get him to write for your paper. He is competent, and an E. M. minister. M. W. MURPHEY.

Cuba, Fulton Co., Ill., May 6, 1883.

Thank you, friend M. May God bless you in your efforts to lead men to give up the bad habit. I am especially glad to hear of a minister dropping it, because I know he will never go back again. It is an encouraging thought, that the ministry as a body have now almost entirely given up the use of tobacco. Some of the old gray-headed ones hold to it, of course; but I believe it is almost an unheard-of thing to find a young minister using it in any shape whatever.

Allow me to say, in all candor and truth, that, after using tobacco (both smoking and chewing) for 35 years, I left it off last August, and am no longer a slave to the vile habit, and have persuaded several persons to do likewise. F. W. THOMPSON.

Quincy, Ill., April 17, 1883.

I have concluded to quit the use of tobacco. I was 24 years old yesterday, and have been a constant user of the filthy weed for 14 years of time. If I break over, I will send you the money to pay for the smoker. GES. A. CATER.

Summerfield, Noble Co., Ohio, April 6, 1883.

I see you are giving a smoker to every one who will discard the use of tobacco. If you will send me a smoker I pledge you my word that I will, by the help of God, never use it again. If I do, I will pay you for it. I do this because every time I see the smoker I will think of the pledge. It is my desire to quit it, for I know it is a filthy habit.

Salisbury, N. C., Feb. 18, 1883. L. R. WEBB.

I noticed in GLEANINGS that you would send to any bee-keeper (who used tobacco habitually) a smoker, if he would agree to abstain from the use of tobacco; and as long as he abstained from its use, the smoker should remain unpaid for; but if he resumed its use again, he should pay you $1.00 for the smoker. I willingly acknowledge the above, and shall pay you for the same if I resume it again. J. K. GREGORY.

Crooked Lake, Pa., Apr. 4, 1883.

I quit the use of tobacco the first of February; and if you have not withdrawn the offer, you will please send me a smoker. J. H. ALLENDER.

Tunnelton, W. Va., March 13, 1883.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, JUNE 1, 1883.

But whoso shall offend one of these little ones which believe in me, it were better for him that a millstone were hanged about his neck, and that he were drowned in the depth of the sea.—MATT. 18: 6.

CUSTOMERS wanted for 30 or 40 black queens. Only 31 cts. each. It is not often we have them, so now is your chance, if you want them.

BASSWOOD LUMBER WANTED.

BASSWOOD timber suitable for sections is now getting to be scarce in our locality. Will those who have such lumber for sale please tell us how much they have, and how low they can furnish it by the carload?

THE GOOD CANDY MADE OF POWDERED SUGAR.

THE Good candy made of powdered sugar stirred up with honey is working nicely. The bees eat it, sugar and honey both, without rattling it down or wasting it. Two queens went safely to Canada. Every bee was alive, and only about one-fourth of the candy consumed. How long does it take to learn so simple a thing?

PLEASE don't be in a hurry, friends, in deciding that somebody has tried to "beat" you. It is a comparatively rare thing among bee-men to find one who deliberately and willfully decides to wrong another. Please be slow in "thinking evil," and remember how many times you have decided hastily, and afterward you have found out it was only a mistake or a misunderstanding.

SHORT-HAND.

QUITE a number of the friends have written to us lately in short-hand. When the Munson system is used, we have no trouble in reading it; but the other systems are practically illegible. As there are but two here who can read even the Munson system, perhaps it would be better, in view of future contingencies, to write entirely in long-hand, as all business letters are preserved. We have no objections, however, to letters in the principal European languages.

THE clerk who opens the letters is again complaining because the friends will persist in sending dead queens back in letters. What in the world do you suppose we want of dead queens, friends? It is enough to have you write to us that they are dead, without having their miserable bodies pushed under our noses. Now, will you not please remember, don't send back queens, or any thing else, for that matter, until we tell you we want you to do so? Tell us what the trouble is, in plain English, and we will then tell you what to do.

WE have 5627 subscribers this 28th day of May, 1883.

WAX is now getting to be so plentiful that we can pay only 34 cts. cash, or 36 in trade.

UNTIL further notice, we shall pay 90 cts. for untested queens, and sell them for $1.25.

OUR pay-roll Saturday night, for the week ending May 25, was $761.50. You see, friends, there are a few of us, at least, at work filling your orders.

TRADE is still booming, but not quite as brisk as when the JUVENILE for May was sent out. We shall doubtless be ahead on all orders in a few days more. We can always send fdn. at once when so wanted, and so we can, as a general thing, regular goods of almost any kind; but it is just about all we can do to keep them in stock, without undertaking to make odd-sized sections, frames, etc.

WE are sorry to hear that the bee-hive factory of Adam Miller & Son has been recently destroyed by fire. They are, however, about starting up again, or are doubtless started up before this. I have not yet learned whether they were insured or not. Look out for fires, friends, and keep insured. Don't go into any business, or have your work in any sort of a building, that won't admit of insurance. This is a duty you owe your fellow-men who patronize you, as well as yourself.

PLEASE don't make long, expensive trips for your goods, friends, until you have had some intimation that they have been shipped. A friend has just written us that he has been 24 miles after his goods, three times, and yet he ordered them only a week ago. I am very sorry indeed to hear of such disappointments, but it seems to me our friend was a little thoughtless. After you have been informed that the goods have been shipped, it is quite soon enough to go after them.

As many bee-keepers are moving to Florida, and many more contemplate trips there, it may be well to consider the desirableness of such a plan. The most I should fear would be the point in the sermon we have this month in Home Papers — that a climate that would furnish every thing with so little labor would ultimately tend to cripple one's best powers and energies. How is it, friends? Can we afford to dispense with the frosts and snows of the North? I, for one, don't believe I can.

WE are very glad indeed to call attention to the low prices at which bees are offered by the pound by some of our advertisers. This would be an especial favor to those who have lost bees heavily, because they can, at a small expense, populate again their deserted hives. I presume they will very soon sell all they have to spare. With the great number of losses that have been reported during the months of April and May, there will probably be a large demand for bees by the pound, and low prices will be a kindness to those wanting.

MILDEWED SECTIONS, AND WHAT TO DO WITH THEM.

During the excessive damp weather, there is more than usual tendency for sections to mold or mildew, especially if the lumber is not fully seasoned, and to have the sections fold nicely the lumber should not be too dry. Well, now, friends, do not be in haste to pronounce them worthless, even if they do look awful. Fold them up and stack them in a heap until thoroughly dry, and you will see them, usually, turn white again; but if they do not, tack a sheet of sandpaper on a table, get some cheap help, and sandpaper them off. It is not a long job, after you get at it; and if the sections are some you got of us, I will pay for fixing them up. There is something queer about the way basswood will "sweat" in damp weather.

CARELESS and heedless people make a world of trouble; but in no place do they make more trouble, perhaps, than in an express or freight office. Imagine one who is needing goods badly, say supplies for his apiary at the time when the honey is coming in, being told that no goods had come for him, and it afterward proves that they were in the office all the while, in some out-of-the-way place, forgotten! Here is a little item that a friend just sent us: —

> I have received my goods. The agent here had them in his office. I went and asked him for them, and he said they were not there; but when you hunted them over the line I had him "penned up." Then he looked and found them.
>
> Covington, O., May 21, 1883. J. N. F. SHELLABARGER.

EXTRA COMBS FILLED WITH OLD HONEY.

QUITE a number are asking now what they shall do with such. Put bees on them, by all means. If you can give a new swarm combs filled, or partly filled, with honey, you can get them into the boxes just so much quicker. After they get well to work in the boxes, and find the honey in the way, they will often uncap it, and move it into the sections above. They will be getting your old honey into new sections and into new combs. Of course, I would not want to do this unless the old honey were a good article. I would never think of extracting the honey in old combs, unless I wanted extracted honey. If you don't need them all now, use them later in the season for building up colonies. Where one wants to raise more bees, they are the nicest things in the world to do it with.

THE INTERVAL BETWEEN FRUIT-BLOSSOMS AND CLOVER.

THE bees with us are just commencing on the fruit-bloom. This is, perhaps, the case with many of you. Of course, there is no danger of robbing now, nor is there any danger of the bees starving, unless very bad, stormy weather should ensue. But when the fruit-bloom is over, then look out. Colonies heavy with brood will need many pounds of stores to carry them through until clover blooms; and if they have not a bountiful supply of stores, be sure they are fed. Keep egg-laying and brood-rearing going right along at a galloping rate, and don't mind the cost of sugar. Any thing will do to feed now. Cheap maple sugar, brown sugar, wet with water, or even grape sugar; but I would not give them any more than they will need to take them through until clover. Sometimes locust-bloom comes in and fills up this gap. Keep a careful watch of the plants and flowers, and stop just as soon as the bees can get natural stores. But whatever you do, don't let them starve for lack of food during this, perhaps the most critical point, during the whole year.

DELAYS IN RECEIVING GOODS.

IT may be worth while to tell our bee-friends a little how mercantile men do in lines of goods that are in great demand, to avoid delays. It is simply this: They send an order to the factory six months ahead, or a year, before the goods are wanted, and tell them to make and ship them at their convenience. By so doing, they have a full stock on hand when none can be obtained elsewhere, and thereby advertise their business in a way that nothing else does, by furnishing goods promptly that can be obtained at no other house. Of course, this requires capital, but much money is lost by the need of a thing at just the proper season, and it should be remembered that, with most of you, money can be obtained for about six per cent interest. Now, this small amount of interest is a trifling matter, compared with losing a crop just for lack of proper facilities for caring for and marketing it. Of course, this would apply only to staple goods that are sure to be needed year after year. In our business, we often order supplies of honey-knives and such like goods in the fall, so as to be sure to have them ready for next spring.

CORRECTING MISTAKES.

It is an old saying, and one that is generally true, that right harms no man; but it seems to me, my friends, that we sometimes carry the matter of rectifying mistakes to almost too great a length, and often, perhaps, without hardly thinking of it. With the multiplicity of goods we offer for sale during the busy season, like the present time, mistakes will, in spite of us, creep in, and you know I have requested you to inform us of these. But suppose the mistake in question is only on a five-cent or three-cent article. Is it really worth while to have expensive clerks stop their work and hunt over files of old letters, to see whether the error was in your order or in our filling the order? I suppose most of you, in dealing or in making charge, are accustomed to let a matter of three or five cents drop, when the change is not at hand to make it right. A postal card is just at hand to-day, complaining of some mats for hives. After the clerk looked it up, we found it was the second time he had written about it; and on looking up the order, we found that he had only two mats at five cents each, and one of them was too small. The time consumed in hunting it up was far more than the value of the mats. Now, we make it a rule here to hand over five cents to anybody who says we owe him that amount; and when we receive goods with shortage or breakage to an amount not to exceed 25 cents, I have, *as a general thing*, been accustomed to let it drop rather than to make anybody any trouble about it. Would it not be best to consider this point a little?

A "BIG TROUBLE."

There is one big trouble, friends, that I don't just now see how to get over. It is the old story in regard to carelessness. One friend writes us just this minute, to say that the file he said was not put in with his goods is found, after all. A few days ago he declared we didn't send it, and his order had to be hunted, to see if he ordered one. When found, with *two* checks on it, to show that *two* clerks had seen it put in, I was either obliged to scold them for carelessness, or write back to our friend that he *must* have overlooked it. Neither one is a very pleasant task to do. Should I send him another by mail, without even stopping to look up the order, and thus save time and trouble? There are two objections to so doing: At the low prices we sell these things, I can not afford to; and then, again, we often find that the man who says he ordered a file, didn't order any at all — he only *thought* he did. I must keep a check on the clerks too, and most of them want to know when complaints are made of their work. There is no way but to go back, hunt up letters, and trace complaints. Yesterday a friend wrote that the rabbets he declared were left out were in the package after all. Somebody had lifted them out with the tin hive-covers, and then he declared there were none sent, and an innocent clerk came very near having to pay heavy express on more rabbets. It often takes more time to hunt up such blunders, and get at the truth, than it does to put up the goods. What shall we do, and who can help us in this matter that is such a very great clog and hindrance in business?

COOK'S NEW MANUAL.

We have just received a large invoice of Professor Cook's "Manual of the Apiary." The book has been thoroughly revised, and containes much additional matter, besides a large number of new engravings added. It seems to me that every bee-keeper should have Cook's Manual. The ground occupied is in many respects quite different from that of our A B C book. As I have explained to you before, the A B C book is written mainly to give plain practical directions for the A B C scholar to make a success with his bees, with as little expense as possible, and as little confusion as may be, as would come from knowing all the different hives, etc., now in general use. Now, Cook's Manual, in one sense, occupies a much broader field than the A B C book. He touches on many things that I omitted entirely. He also describes many methods of management that no mention is made of in the A B C book, and gives a bird's-eye view, as it were, of the present state of affairs of the science of bee culture over the whole world. Of course, he does not describe as many things minutely, nor go into details as I do in the A B C. Had he done so, the work would have been too voluminous for most readers. As Prof. Cook is one of our leading entomologists, he has taken up the natural history of the bee, and carried it further, in many respects, than the A B C book has. We have made arrangements with friend Cook, so as to furnish the Manual at the same price as the A B C book, both wholesale and retail. That is, when you are making up a club for the A B C and Gleanings, you can count Cook's Manual on the same terms.

CIRCULARS RECEIVED.

We have just printed for H. B. Harrington, of this place, a 4-page list of bees, queens, and farm implements.

Our friend Byron Walker, Capac, Mich., sends us a 4-page circular and price list of bee supplies that ought to be read by every bee-man, even if he doesn't buy any goods of him.

E. A. Thomas & Co., Coleraine, Mass., have mailed us a very complete catalogue of their improved strains of bees; 4 pages the size of this.

P. F. Rhodes, New Castle, Ind., has sent us a one-page list of bees and queens.

N. S. Coggeshall, Summit, N. J., has just received from our press a 6-page list of bees and queens. On account of the destruction of their factory by fire, friends N. S. & W. B. Coggeshall furnish no supplies at present.

M. B. Moore, Morgan, Ky., sends out a one-page list of Italian queens. With each order, friend Moore sends a specimen of his penmanship. Hardly in a lifetime do we find so exquisite a penman as he is. Friend Moore has the good will of our typos on that score, as have Hasty, Hutchinson, and others.

L. E. Mercer, Lenox, Iowa, sends us a 16-page list of bee supplies. In winding up, friend Mercer writes the following very kind words relative to the A B C book and—friend Novice: The A B C book is certainly the best book ever published on bee-keeping. It is especially adapted to the wants of the beginner. Every person that has a stand of bees should have one of these books; they are well bound and nicely printed, and illustrated with many fine engravings. Friend Root has a peculiar way of writing that makes one feel when reading his book as though he were just talking to him; and I am sure that after you have read his book you will, as I do, think of him as "friend" Root.

OUR $175 ENGINE AND BOILER.

A WORD OF PRAISE, WHERE IT IS WELL DESERVED.

A WORD for those engines. The one I ordered of you some time ago, a cut of which is shown in your circular, works like a charm. It is called 2-horse power, but I can do more with it than can be done with two horses. I can saw 20 cords of wood in a day with it; and for grinding feed (for which it is used mostly), I can grind 10 bushels per hour, and it is a clipper to run bee-hive machinery. The engraving is a little wrong; the governor is not as shown.

We are having cold rainy weatther. Bees are having a slim chance; when it is warm enough for them to fly, it is too windy. Chaff hives are the only safe thing this spring. A. Osbun.

Spring Bluff, Wis., May 21, 1883.

Thank you, friend O. I remarked but a few days ago, that it was a little singular that not one breath of complaint had ever been made of any one we had sold in the years past. They have been improved some, since the cut was made.

SAVE YOUR FOWLS. SAVE TIME and MONEY.

FANCY POULTRY, POULTRY POWDER,
ITALIAN BEES, BEE-HIVES, &C.
6tfinq For circulars, address
J. R. LANDES, Albion, Ashland Co., Ohio.

TO increase my business I make the following unparalleled offer, price and quality considered:—Dollar Italian queens, 75c; one queen to new customer, 50c; setting of Brown Leghorn eggs, $1.00; two settings, or one queen and one setting, $1.50. Correspondence solicited. Queens shipped in July and August. C. M. GOODSPEED, Thorn Hill, Onon. Co., N. Y.

CONTRACTS WANTED WITH SUPPLY DEALERS,

Dealers, and those who contemplate becoming such, are requested to write for estimates on job lots of hives, sections, etc. We make *specialties* of chaff and Simplicity hives, but will make other styles, if unpatented, and ordered in considerable quantities. Let us know the kind and probable quantity of goods you expect to handle, as well as any other information you may deem necessary, and we will send you prices that we are confident will be satisfactory.

S. C. & J. P. WATTS,
10tfd LUMBER CITY, CLEARFIELD CO., PA

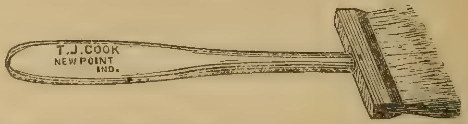
HOLY-LAND AND CYPRIAN QUEENS AND Farm Implements!

I have a fine lot of pure Holy-Land and Cyprian queens which I will sell for one-fourth more than Root sells his Italians. Also a few pure Albinos; they are light-colored, and very gentle.

I keep on hand, and can ship from the factories where made, a stock of Farm Implements, a two-horse corn-planter, with drill attachment; one-horse corn-drills that will plant in hills; a steel-toothed harrow in three sections, with lever to clear from trash, or pass over obstacles; spring-tooth harrows; common harrows, with 40 or 50 teeth; sulkey hay-rakes; sulkey cultivators, plow-sulkeys, etc. Send for Circular. tf

H. B. HARRINGTON, Medina, O.

COOK'S BRUSH



FOR GETTING BEES OFF THE COMBS.

Just what every apiarist needs. Brush is 4½ in. wide, handle 8 inches long. Sample brush, 18c; 7 brushes, $1.00, 15, $2.00, by mail, postpaid. Per gross by express, $15.00. **T. J. COOK,**
6d New Point, Decatur Co., Ind.

ITALIAN QUEENS.

Single queen (untested, laying).................$1 00
Six for.. 5 00
Address R. A. BAGSHAW,
6d Blue River, Wash. Co., Ind.

COMB FOUNDATION.

Italian Bees by the pound, nucleus, or colony. Queens furnished when desired. Five per cent discount on A. I. Root's prices. For particulars, address
4-6 E. Y. PERKINS, Jefferson, Greene Co., Iowa.

L. E. MERCER,
—OF—
LENOX, IOWA,

Breeds Pure Italian Bees and Queens for sale; Manufactures the Root Chaff Hive, the Standard Langstroth Hive, and the Mercer Chaff Hive. Sections, dovetailed or all-in-one-piece. I furnish every thing needed to run a first-class apiary. Satisfaction guaranteed, or money refunded. Circular and price list free. 6-7d

FOR FULL COLONIES OF
ITALIAN BEES AND QUEENS,
4-6d TWO AND THREE-FRAME NUCLEI.
Address P. F. RHODS, NEW CASTLE, HENRY CO., INDIANA.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1000; comb fdn. 55c per lb. Circular free.
2-6d B. Walker & Co., Capac, St. Clair Co., Mich.

BEE KEEPERS' GUIDE
28 Pages, 50c. per year.
SPECIMEN COPY FREE.
5-7d **A. G. HILL, Kendallville, Ind.**

PURE ITALIAN QUEENS.

Carefully bred from imported and selected home-bred mothers of best strains. Safe arrival guaranteed by mail.

1 untested queen, before July 1, $1.10; after, 90 cts.
6 " " " " " 6.00; " $5.00
Tested queens, Nuclei, etc., etc.
Send for circular. D. G. EDMISTON,
6d Adrian, Lenawee Co., Mich.

W. Z. HUTCHINSON
Rogersville, Genesee Co., Mich.,

Is now receiving Italian queens from the South (for particulars see advertisement in April Gleanings), and can send them by return mail at the following prices: Before June 1st, untested queens will be $1.50 each; during June, single queen, $1.25, or six for $6.00; after July 1st, single queen, $1.00; six queens, $5.50; twelve, $10.00. Tested queens (reared last season in the home apiary), before June 1st, $3.00 each; during June, $2.50 each; after July 1st, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 5tfd

1883 THIRTEENTH YEAR. 1883

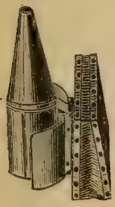
Italian & Syrian Queens.

Tested queens, in April and May, - - -	$2 50
Tested queens, in June and after, - - -	2 00
Untested queens, in April and May, - - -	1 25
Untested queens, in June and after, - -	1 00

Sent by mail, and safe arrival guaranteed. Send for circular.

Address **W. P. HENDERSON,**
2-7dinq MURFREESBORO, RUTH. CO., TENN.

WARRANTED ITALIAN QUEENS, from hardy improved stock, $1.00 each; from imported mothers, 50 cts. extra. Satisfaction guaranteed. None of the new races kept in this vicinity.
2-7 W. H. PROCTOR & CO., Fairhaven, Vermont.



FOR THE

OLD RELIABLE

BEE-SMOKERS

or Uncapping - Knives,

Send card for circular to

BINGHAM & HETHERINGTON,
ABRONIA, MICH. 3-tfd

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have; but at last I am "boss;" Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham & Hetherington.

Respectfully, G. M. DOOLITTLE.

The Excelsior Poultry Yards

are always well stocked with Pure-Bred Poultry and Italian Bees; Extractors, Foundation, Hives, etc., for sale. Job Printing of every description done cheap for cash. Circulars free.

Address J. T. FLETCHER, West Monterey,
12-9d Clarion Co., Pa.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

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LOOK!

A Perfect MORSE Telegraph Instrument for beginners. Send for catalogue.
5-12d P. B. KINGSLEY, Greeneville, Greene Co., Tenn.

BEE-HIVES FOR SALE!

I manufacture every thing needed by bee-keepers, made of wood, not patented. I make Simplicity and Langstroth hives a specialty. My work is as good as the best, and my prices always please my customers. Send postal card for my illustrated catalogue.

4tfd H. F. SHADBOLT,
WINOOSKI, - - SHEBOYGAN CO., - - WISCONSIN.

BURNT OUT!

Having lost our machinery by fire, we can furnish no more SUPPLIES until further notice. We have a large stock of Italian and Holy-Land Bees, and can ship Queens and Bees as usual. Circulars on application to W. B. COGGESHALL, SUP'T.,
Hill Side Apiary, Summit, N. J.
N. S. COGGESHALL, PROP'R. 5-7

BEES AND QUEENS FROM MY APIARIES.

QUEENS AND NUCLEI IN SEASON.
3tfd Circular on application.

J. H. ROBERTSON, PEWAMO, IONIA CO., MICH.

Reduction

IN PRICE OF FOUNDATION.

Beeswax has "gone up;" but as we bought our stock before the advance, in order to close out our entire stock before the rush of the honey season, we will, until further notice, sell our Vandervort fdn. at former prices—50c per lb. for heavy, and 60c for light. If ordered in 25-lb. boxes, 49c and 59c; and if ordered in 100-lb. lots, 48c and 58c.

We can fill orders at once for any size desired.

Address **G. W. STANLEY & BRO.,**
5tfd **WYOMING, N. Y.**

HEADQUARTERS FOR TIN POINTS.
Price, 20 cts. for 1000, by express; by mail, 30 cts.
5tfd W. C. GILLETTE, Le Roy, Genesee Co., N. Y.

HIVES, SECTIONS, &c.

Langstroth, Simplicity, and other hives.

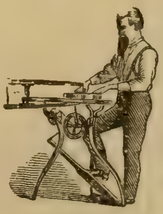
The Lewis One-Piece Section. V groove.

The Lewis Two-Piece Sections. V groove.

We make the one-piece, two-piece, or four-piece dovetailed or nailed Sections, any size, from half-pound to 6x6x2 inches, or any other SUPPLIES for Bee-Keepers, made of wood.

4¼x4¼ of any of the above kinds of sections, -	$4 50
All other sizes, larger to 6x6, - - - - -	5 00
Half-pound sections, - - - - - - -	3 50

Send for Price List and illustrations of our NEW HIVE for comb honey — something new, just out. Price Lists will be sent only to those that write for them. **G. B. LEWIS.**
Watertown, Jeff. Co., Wis., Feb. 1, 1883. 2tfd



BARNES'

Patent Foot and Steam Power Machinery. Complete outfits for Actual work-shop business. Lathes for Wood or Metal. Circular Saws, Scroll Saws, Formers, Mortisers, Tenoners, etc., etc. Machines on trial if desired. Descriptive Catalogue and Price List Free.

W. F. & JOHN BARNES,
Rockford, Win. Co., Illinois.
No. 2009 Main St. 11tfd

BE SURE

To send a postal card for our illustrated catalogue of

APIARIAN SUPPLIES

Before purchasing elsewhere. It contains illustrations and descriptions of every thing new and desirable in an apiary,

AT THE LOWEST PRICE

Italian Queens and Bees.

J. C. SAYLES,
1-6d Hartford, Washington Co., Wis.

PATENT FDN. MILLS. 6-inch, $10.00. 10-inch, $15.00.
2tfd WM. C. PELHAM, Maysville, Ky.

QUEENS.

A FEW NICE DOLLAR AND TESTED QUEENS FOR SALE, REARED UNDER THE SWARMING IMPULSE.

SEND FOR PRICE LIST.

6d WILL. A. HAMMOND, Richmond, Henrico Co., Va.

FIVE TEN-FRAME COLONIES.

Prices until July 15, 1883. Five-frame colonies, L. frame, consisting of a pure, young, fertile, Italian queen, carefully bred from best mothers, with five new combs wired in, filled with brood and stores, and covered with young bees. Better than a natural swarm. Price $5.50. Five or more, $5.00 each.

After July 15, full ten-frame colonies in one-story Simplicity hives, ready for fall work, $8.00. Send for circular. Address *Wm. LITTLE,*

6-7d *Marissa, St. Clair Co., Illinois.*

ITALIAN BEES

BRED FOR BUSINESS.

MOORE'S PRICES FOR JUNE.

Warranted queens, each, $1.25; per half doz., $6 50; per doz., $12.00. Tested queens, each, $2 25. Three-frame nucleus and warranted queen, $3.25. Full colony, on 9 frames, in 1-story Simplicity hive, $8.00. The combs are all in the Langstroth frame, wire-strengthened. Safe arrival and perfect satisfaction guaranteed. See advertisement in May GLEANINGS. Circulars free. Address *J. P. MOORE,*

6d *Morgan, Pendleton Co., Ky.*

PERRY'S PRICE LIST

OF IMPROVED ITALIAN BEES AND QUEENS

may be found on page 228, present volume. Bees delivered last week in June, at prices for June. If wanted earlier, add 25 cts per lb., or 12 cts. per comb of brood for each week. Send on your orders.

S. C. PERRY,

6tfd PORTLAND, IONIA CO., MICH.

I Can't See

why men will pay $2 or $3 per lb. for bees when they can be bought for 70 or 80 cts. See my ad. on page 225, and my article on page 231, May GLEANINGS, for prices, and reasons for selling so "awful" cheap. No queens for sale. *T. P. ANDREWS,*

6d *Farina, Fayette Co., Ill.*

BY RETURN MAIL. Italian Queens, Tested, $1.60; untested, $1.00. Hybrid, 50 cents.

6d H. BARBER, Adrian, Mich.

BEES by the POUND.

During June I will sell bees at the following reduced rates:—

Single pound,	85c
10 pounds or more, per lb.,	80c
25 " " " " "	75c
Tested Queens,	$2 50
Untested "	1 25
Hybrid "	50c

6d J. A. GREEN, DAYTON, LA SALLE CO., ILL.

QUEENS AND QUEEN-REARING.

ITALIAN, CYPRIAN, & HOLY-LAND QUEENS, BEES, AND NUCLEI.

ONE COPY OF MY BOOK ON QUEEN-REARING, AND A TESTED QUEEN OF ANY OF THE ABOVE RACES, SENT FOR $2.50.

Prof. Hasbrouck's opinion of the Handy Book:

"Handy Book received. I am happy to say, that I consider that it tells more on the vital subjects of rearing queens and managing bees so as to take honey, than any book now before the public. It seems to be filled with just those things which practical men find out about their business in a lifetime of work, but which they generally don't tell the dear public."

OUR 22d ANNUAL CIRCULAR AND PRICE LIST, ILLUSTRATED, NOW READY.

6d **HENRY ALLEY, Wenham, Essex Co., Mass.**

Why not BUY YOUR QUEENS and BEES DIRECT FROM The Breeder?

25 cents saved is 25 cents made. If you wish to purchase Italian Bees or Queens early in the spring, and wish a bargain, you should send for my new Price List. Queens ready in April.

3-5d Address **W. S. CAUTHEN,** PLEASANT HILL, LANCASTER CO., S. C.

HIVES! CHEAP! CHEAP! HIVES!

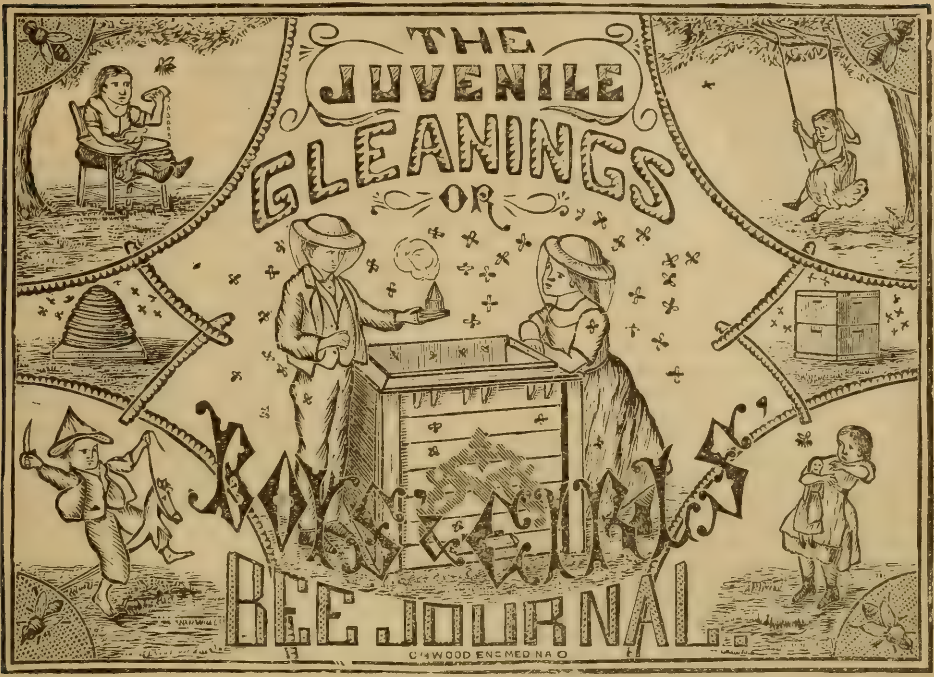
Having put in new machinery, and running exclusively on Hives and Supplies, I can give satisfaction on all orders on shortest notice. Send for price list and circular of Supplies for the apiary.

3tfd **A. D. BENHAM, Olivet, Eaton Co., Mich.**

SOMETHING NEW, NOVEL, RARE, BEAUTIFUL, AND USEFUL.

PARLOR ORNAMENTS MADE OF MICA. Wall-pockets, vases, baskets, brackets, horse-shoes, crosses, picture-frames, letter, glove, and handkerchief boxes; comb, card, and watch cases, etc., etc. For sale at *low prices.* Send stamp for price list to the *only* manufacturer, Miss Lulu Rogers, Cullohwee, Jackson Co., N. C. Will also furnish a cheap grade of *mica* for honey-boxes or observatory-hives. 4-6d

GLEANINGS IN BEE CULTURE EXTRA.



He that is faithful in that which is least, is faithful also in much.—LUKE 16. 10.

PUBLISHED BY A. I. ROOT, MEDINA, OHIO.

Vol. II. JUNE, 1883. No. 3.

MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10: 29.

All things work together for good to them that love God.— ROM. 8 : 28.

HOW little do we realize how dependent we are on our neighbors, until we are suddenly deprived of one or more of them! I have told you something of the new neighbor who has been of late taking down what I say to you, in the short-hand writing, as you may remember. Well, of late our mails have been very heavy indeed, and almost every clerk in the office was getting gradually a little behind, even though some of them worked pretty well into the night, to keep up. We got more help, until there was hardly sitting room for us; but the new help could take hold of only a limited part of the work, as a matter of course; but as we were getting over into the month of June, I thought we would not get very much behind, for orders usually begin to drop off a little toward the middle of June, as a general thing. It did occur to me at the time, that it would be a rather sad thing if any of the principal clerks should be sick right in such a crisis; but I kept hoping they wouldn't, just yet, any way. Please do not think I am speaking lightly of the bodily welfare of my boys and girls, for I certainly do not mean to, but I only meant to express my anxious solicitude for the rights of those of you who may have to wait for your goods, as well as for the good reputation of our establishment. Well, just about as soon as the June No. was sent you, our short-hand writer asked for a couple of days' absence, and I thought I could handle the type-writer again for as much as two days, without very much trouble, and so she went away. Thinking she would be back promptly, I piled up some letters that I thought could wait as much as two days, without harm. Instead of the mails getting lighter, they seemed to grow heavier, until great piles of unread letters began to stare me in the face before I went to bed at night. Toward the close of the first week in June, the neighbor right at my side, who has almost sole charge of the books, and all the money that comes in and goes out, was suddenly summoned to the death-bed of her mother. Of course, it gave us a shock here, to hear of a death in the family of a shop-mate; but to you who know us only as the folks who hold your money, and do not send your goods, it was a different matter. What should we do to save you from loss, who know nothing of our family affairs here? At once I turned my thoughts toward Ida, of whom I have told you; for, in fact, Ida was equal to taking almost any post in our whole establishment; but she, poor tired girl, was already nearly overburdened. All the help possible was given her; but the morning after the book-keeper was called away Ida was taken with nervous fainting spells, almost the minute she reached the office. It seems her girl left her unexpectedly, and she tried to do her own housework before coming here, and a long walk on a hot morning overtasked her strength, and she was carried home and laid on a bed of sickness that seemed to cut off all hope of even her presence to direct, for at least several days to come.

What was to be done — especially what was to be done for you, my friends? Ernest had been assisting the girls in the office work, and knew how to fill a great many important posts. His health is greatly improved, and he has decided not to take his northern trip until after the swarming season. I asked God what was to be done, and then I got the best help I knew of. As every room in the building was doing its utmost, I was obliged to call in outside help mostly. Ernest, Maud, and even Blue Eyes, were installed, and a little demure black-eyed woman whom the children fondly term "Aunt Mate" was installed in the place Ida had so long held, of opening the letters, counting the money they contained, and distributing them for the dozen or more clerks to whose department they belonged. Do you think it would be a small thing to just open letters and take out the money, my young friends? Well, I tell you that, after years of experience, I have found it one of the most trying and difficult things I ever called upon a hand to do, to do it accurately and rapidly. I have seen a great many who thought they could do it; but before they were through with one large mail, they found out their mistake. For instance, a great many of you say you put so much money in the letter, and then forget to do so, and it therefore devolves on the clerk to count carefully all the money and stamps, and note the same on one corner of the letter, and then see if it agrees exactly with the amount claimed to have been inclosed. A careless person might drop some of the stamps or money, or might leave some of it in the envelope when it is thrown into the waste-basket. Again, many of you omit your name or town or State, and sometimes we find a clew to it on the envelope; no envelopes are to be thrown away until the full address is seen to be all there; and besides these two things there are almost a dozen other equally important ones to be kept constantly in mind. It is true, that every one who sends us a letter ought to be sure himself that the address is complete; and he ought also to be sure the money is right, and that all stamps or loose articles be securely pinned or pasted to the letter, so they can by no accident be dropped. We have learned by sad experience the importance of thus fastening every thing inclosed, securely to the letter, although very few letters come to us that way. Only last week a friend insisted his stamps were all inclosed, even after being told they were not, and he then said our clerk must have left them in the envelope, and that I ought not to employ such careless clerks. No wonder poor Ida looked hurt at such an insinuation. After all the intense zeal and earnestness with which we, day after day, scan carefully, *inside and out*, every envelope that is put into our hands, to be told we must have left the stamps in the envelope! I tell you, friends, carefulness is reduced to an science here in this busy office of ours; and were it not, our business would never have assumed the position it has now.

Well, Aunt Mate opened the letters—she is Mrs. "Neighbor H.," you know, and of course she knew bees, and letters too, pretty well. Another new neighbor must count the money and get it to the bank; and I tell you, that was another pretty big job, for one unused to it. Some of the other clerks might have assisted, it is true; but they were already overburdened, as it was. Willing and able helpers we had, almost as many as could get a sitting-place or standing-place in the office; but without the old "stand-bys," Ida and Miss M., our office looked like a "home without a mother." Folks were complaining because we did not send the goods, and the goods were going by the carload daily; but the stoppage in the office prevented their bills from going, and for a few days it seemed almost impossible to tell any one whether his goods had gone or not. Were the machinery of the ledgers moving along with its accustomed daily routine, it would be easy to tell all about it at a glance; but as it was, I was, almost for the first time in my life, unable to give every letter a prompt answer by return mail. As it was of far more importance that goods be sent, than that questions were all answered, for nearly a week some of you may have written, and written *again*, even without any reply. Of course, we got many lectures on the importance of punctuality, and a good many seemed to take it for granted that *that* was the way we *always* did things when they administered advice; but we were too busy to say a word back, and perhaps it was just as well to let actions speak instead of words.

Miss M. is with us again, and the pile of unanswered matter is diminishing; but Ida is still prostrate on her sick-bed; and although she teases daily for some of the letters to answer to you, my friends, she looks so white and feeble that both the doctor and myself tell her she had better lie still and be quiet. Although it has been a hard matter for me to think of the annoyance it has perhaps given you, my friends, yet there have come some pleasant experiences about it. Many of the boys and girls who are my neighbors have developed business powers and abilities I hardly expected to find; and if you should get a price list or a sample copy addressed to you in a very pretty, childish hand, you may recognize it as the handwriting of Blue Eyes. We have all worked hard to keep up, and many of us have prayed that God would give us strength and wisdom; and if any of you, my friends, have suffered serious loss by this blockade in the office here, if you will tell us what will make the matter satisfactory, I will try to pay it. God has taught me a lesson by it; for I know better now the value of these kind neighbors about me, and I can feel, too, how helpless I should be without them. It has, as it seems to me, drawn closer the ties of friendship that exist between us, and made us feel that we are working busily here together for something that can not be computed in dollars and cents.

VIRGIL'S TREATISE ON BEES.

Continued.

THE ORIGIN OF TIN-PAN MUSIC.

COME, now, of nature's gifts to bees I'll tell,
How Jupiter did cause them to excel;
For what reward they sought the tuneful sound
And clanging brass of priests on Cretan ground,
And feared the king of heaven, whose power did rise
Within the cave beneath the Cretan skies. (1)

BEES AS AN ORGANIZED NATION.

Bees, and they only, (2) of all things create,
Have common offspring, (3) public buildings great,
As of a city whose undying cause
'Dures on for ever under mighty laws; (4)
Alone their hearts with love of country move,
Alone their settled household gods they love. (5)
Of coming winter mindful, swift they ply
Their work in summer, and their stores lay by.

DIVISION OF LABOR. (6)

Some watchful seek the food that nature yields,
And by a fixed agreement scour the fields; (7)
And part within the inclosure of their homes
Do lay the first foundation for the combs,
The soft propolis that on bark appears (8)
Placing, like sad Narcissus' lasting tears; (9)
From thence with art the tough wax they suspend,
While others all their care and labor lend
To nurture up, their numbers to replace,
The full-grown youth, the hope of all the race;
Others, the purest honey crowded stow,
And cells with liquid nectar cause to grow; (10)
Others there are to whom by lot there fell
The keeping of the gates to guard them well.
These, observations take on clouds of heaven,
And warnings give ere harmful showers are driven, (11)
Else from those coming in they take the loads,
Or, phalanx formed, forth from the inclosed abodes
The drones, ignoble herd, they sternly drive, (12)
And strict forbid their access to the hive.
Thus glows the work with zeal almost sublime,
And fragrant honey reeks with smell of thyme.

COMPARING LITTLE THINGS WITH GREAT.

As when from metal mass in waxen heat
The Cyclops haste Jove's thunderbolts to beat, (13)
Some, blast on blast with bull's-hide bellows make,
The hissing shafts some temper in the lake;
Meanwhile, with blows laid on, Mount Ætna groans,
Each following each in rhythmic thunder-tones;
With mighty force their giant arms they raise,
And turn the bolt with forceps divers ways.
Not otherwise, if little things with great (14)
One may compare, the fervent love innate
To Attic bees, of holding honeyed store,
Each in his duty urges evermore.

(1) In this month's section we run upon some of the queer things that little people in Virgil's time had to believe. I'll tell the story over; but as to believing it, you don't "have to." You notice, the poet does not explain much himself: he rather took it for granted that so well known a doctrine did not need much explaining.

The Romans taught that there were many gods, and that these many gods had a king over them who was the supreme ruler of heaven and earth. A great while ago Saturn was the king of heaven. After a while he had a little baby-son whose name was Jupiter. Somehow or other, Saturn found out that his son would grow up to be greater than himself — would be king of heaven in his place, while he would have to take a back seat. After reflecting upon the matter, he resolved that he would eat little Jupiter up before he got big enough to be king. Some kind friends of the baby desired to save his life by hiding him; but as babies will cry, and Saturn would be certain to hear him, the project was a pretty difficult one. At last it was managed in this wise: There were a lot of priests in Crete who conducted their worship with an unearthly racket, made by pounding on metal instruments. They kindly consented to worship a little more and a little more zealously than usual, so as to keep up a rumpus all the time, night and day. There was a cave there where the baby could be kept out of sight, and the noisy worship prevented Saturn from hearing him. A motherly goat furnished the milk for the baby; and to crown all, the bees interested themselves in the matter, and brought honey to the cave for the baby. And so it came about, that Jupiter grew up on milk and honey until he was strong enough to put down old baby-eating Saturn and take the throne himself. Of course, Jupiter couldn't do less than to reward the bees that had fed him so long; and so he gave them wisdom and honor above all the insect creation. And they, on their part, are very fond of remembering how they won their great honor, insomuch that, even when they are running away, if you will make a racket for them, like that which the Cretan priests used to make, they are so pleased that they will kindly stop and consent to go where you wish them to go.

(2) I think we may mitigate this statement by supposing that Virgil meant that no other creatures showed *all* these wonderful points, rather than that no other creature could show any of them.

(3) "Common offspring." Here the author is "just a shouting." He gets near a point that has been almost totally neglected by moderns, although it may be of considerable importance. To illustrate the matter, a grafted tree is the common offspring of the tree that furnished the stock and the tree that furnished the cion. It is usual to think only of the latter as the parent tree; but it is well known that the former does exert a certain influence. Take a twig of Early-Harvest apple, and cut it into two cions. Now graft one on a tree that bears small, late, sour, crabbed apples, and the other on a tree that bears large, good, early apples. Both trees will be Early Harvest — "pure" Early Harvest, we may say; but, if I am right, they will differ a good deal from each other in the direction of their original fruit. I have been getting more and more convinced that the same sort of warping takes place in bees. Who has not seen how certain hives, or groups of hives, retain good or ill qualities from year to year, although the queens have been changed meantime? If we can put any faith in the statements of seemingly truthful men, the Cyprians were gentle at first (while the brood reared by gentler bees lasted), and afterward became perfect furies. I pretty strongly believe that, in constitution, energy, healthfulness, wintering qualities, and perhaps some other things, bees inherit not wholly from the queen and drone, but also in a lesser degree from the workers that se-

crete the milky chyme, without which the eggs can not hatch. This chyme is surely more vital to the hitherto dormant egg than the sap of another root is to a grafted cion. If this doctrine is correct, two female eggs from the same queen, one reared a queen in a valuable colony and one in a worthless colony, will each partake a little of the energy or worthlessness in which it was developed. Still further, two combs filled with eggs from the same queen, one given to an energetic colony and one to a worthless one, will hatch out workers varying in the same directions.

(4) The determination to do just so, and no other way, that bees manifest so strongly, is quite suggestive of the idea that they recognize the force of some mighty laws that they would not swerve a hair's breadth from if they could, and could not if they would.

(5) A bee's love is not personal, but seems to be a love of locality, somewhat like that of the cat among animals, only a great deal more so.

(6) This division of labor is among men one of the triumphs of modern civilization; but the wise little bees reaped the advantages of a division of labor ages long ago.

(7) I guess this "fixed agreement" is an error. Their good judgment, and wonderfully keen scent, will account for their movements, I think, without supposing that they agree to harvest a certain white-clover field to-day, and the chestnut pollen to-morrow, and the earliest basswood bloom the next day. They do certainly have some speedy way of finding out just about where their bread is buttered.

(8) "Bark" — who would have thought of that as a source of propolis? And are there indeed two grades of propolis, one to putty up cracks, and one to mix with beeswax in laying the foundation for the comb?

(9) Narcissus was a nice and sensible (?) young fellow who fell in love with himself. He cried so much to think he couldn't marry himself that he all pined away. His tears were considered imperishable, and the tear-shaped drops of propolis, often dotted about the top of the hive, are here compared to them.

(10) How accurate this is! They won't build comb much in advance of the honey-flow; but when the honey comes in, then the cells will be extended right away.

(11) This is a rather doubtful point. It may possibly be that the old sentinel-bees around the entrance do observe the weather for the benefit of the colony; but I rather think it is the field-bees themselves that do that; in fact, they must sometimes, or they could not get home so promptly, just in advance of a sudden shower.

(12) Notice that Virgil does not fall into the prevalent modern error of saying that workers *sting* the drones, but gives us the exact facts. Bees very rarely sting drones, although I have seen one case of it. They simply drive them out of the hive. If they will go elsewhere, well and good; if they insist on returning, they just keep worrying them till they worry them to death. (Human smart housekeepers are oft accused of doing the same with the masculines.) Pin an insect to the wall with a cruel pin, and he will live two or three days; but shut him up in a little box, where he can worry and scrabble around, and he will worry himself to death in a few hours, sometimes in one hour.

(13) Here's another thing you don't have to believe. Jove is another name for Jupiter. The Cyclops were enormous one-eyed giants who lived underneath Mount Ætna, and worked at the blacksmith trade. They made thunderbolts for Jupiter to throw when it thundered. When they got a fresh order for a thousand of them, that must be done in time for the next storm, I suppose they pitched in about as friend Root's boys do in filling the spring orders.

(14) Some of the critics strongly condemn Virgil for bad taste in comparing honey-bees to Cyclops. It is bold; but to my mind it seems admirable; in fact, scarcely any passage in the poem more impresses me, considered as poetry simply.

FRANK BENTON'S NOTE.

Mr. Benton has my thanks for the added note concerning Virgil's bee-eater, as drawn from actual observation. Should this translation ever be republished in permanent form, I shall be glad to avail myself of it.

BAD GRAMMAR.

I didn't see, until it appeared in the JUVENILE, that I had a singular verb agreeing with two nouns,

"Rare as the wealth and taste of kings *adorns*."

The verb can not be changed without spoiling the rhyme; but we can cuff one of the nouns into an adjective, and make it, —

"Rare as the tasteful wealth of kings adorns."

So that's the way we'll play it was.

E. E. HASTY.

Richards, Lucas Co., O., June 8, 1883.

Well, I do declare! And so, friend Hasty, we are to believe this "tin-pan business" all came from that story about the priests raising a din to drown the baby's cries. Our boys in jail once on a time took a sudden fancy to singing hymns with such unusual energy that suspicion was aroused, and investigation showed they sang to drown the noise one of their number made in trying to saw off one of the bars of their grating; so you see those priests were not the only ones who used zeal in their devotions, to drown some other noise and divert suspicion.

I can't quite agree on No. 4, friend Hasty. I will grant that Cyps brought up in a hive with gentle Italians would very likely learn to be gentle too; but I don't believe a queen would raise offspring perceptibly different, no matter what kind of bees nursed her. Still, you may be right, and I wrong.—In regard to No. 7: There is something wonderfully strange in the way bees do scatter over their whole field, giving each basswood-tree about an equal number of bees, even though they be miles apart. Why is it that some trees are not overlooked entirely, and others overcrowded?—Friend H., the little sketches you give us in this paper, of ancient mythology, are especially interesting after having read about Jupiter and Mercury in our recent Sunday-school lesson; and your whole translation seems to be eminently fitting for a juvenile bee journal. We have already discussed, here in the office, having the whole in a neat little book, when it is finished.

HOW NETTIE'S PA HUNTS BEES.

ALSO SOME SUGGESTIONS IN REGARD TO CHEAP BEE-HIVES.

WE do not keep many bees, but sometimes pa hunts them. First he puts out some bait, which is some honey-comb, then watches to see which way they fly. When they gather all they can carry they fly straight to their home. When pa finds a swarm in a hollow tree he saws it off above and below the honey, and nails a board on top, and sets it on a board. It is raised up a little, so the bees can get in. At night, when they are all in, he covers up the holes, and takes it home. Sometimes he chops the tree down, smokes the bees, and gets the honey. One year he got over 400 lbs. of honey in this way.

DECOY HIVES, AGAIN.

Sometimes he takes a box or nail-keg, and nails up both ends, and makes two or three holes so the bees can get in; he fastens it up in a tree in the woods, and in a few days or weeks a swarm finds the box and takes possession. One year he got a swarm in an old churn, and once he took a sugar-trough gourd, cut a hole in one end, and got out the seeds, and fastened the end up again, then bored two or three holes for the bees to go in. In a few days there was a swarm in it. NETTIE FREED, age 13.

Lowell, Ind., May 21, 1883.

Why, Nettie, your letter is just wonderful. Gourds for bee-hives! I thought of that once a great while ago, when friend Waldo advertised his sugar-trough gourds, but I couldn't think how to get movable frames into them. Well, after what you have said, Nettie, it has just popped into my head what we will do. Raise lots of gourds, all sorts and sizes, and then when somebody's apiary gets the swarming mania, as friend Hasty and others have told about, just let them swarm, the more the merrier, and put the large swarms in large gourds, and the small ones in small gourds; and when anybody wants to buy some bees with a queen, just sell them a gourd full. You see, they could just crack open the gourd, and let the bees out on their frames; and if there were brood of any account in the larger sheets of comb, they could be transferred. If we use pretty small gourds, the bees would get them full sooner, and swarm again so much the quicker. We would have to judge of the value of each queen by waiting until her bees had hatched, and looking at them as they came out. For convenience, the gourds might be hung to the branches of trees; and wouldn't they look just funny? If they didn't all sell in the fall, they would be light and easy to carry into the cellar for winter. I suppose we might get our surplus honey by cutting holes in the big gourds, and sticking little gourds into them, by cutting off the handle so as to make a neck about like the mouth of a bottle. Our honey would then be ready to go on the market, not "sugar in a gourd," but *honey* in a gourd, and it would likely be the lightest and strongest and cheapest package ever made. By the way, Nettie, how much of a task is it to get the "insides" out of a gourd?

EUGENE'S LETTER ABOUT LOCUST-TREES.

WRITTEN BY HIS SISTER MAY.

As you print a bee paper for boys and girls, I thought I would tell you some things I know about bees and honey, and where they get some of it. I have a swarm of bees that I bought from papa for a dollar. I saved the money that had been given me, and paid for my bees. Papa has 22 swarms of bees. They are all Holy-Lands and Italians but one swarm, which is a black one. I help papa extract honey. I turn the extractor, and sometimes I hold the smoker and smoke the bees when papa is taking out the frames.

HONEY-LOCUST OF TEXAS, ETC.

Bees get honey here from horsemint. It blossoms about the last of this month; they get honey also from elm, persimmon, and black-jack trees. But the best honey-tree here that I know of is the honey-locust. It grows up as high as the oaks and elms; lots and lots of them grow in Trinity River bottoms, and the bees just go down there in great droves when these trees are full of blossoms.

There are two kinds of honey-locusts. Do you know the difference between them? I will tell you after awhile. They have leaves just alike, and slick bark, until they get to be big trees. The leaves grow on a stem about as long as my hand, and from this leaf-stem there put out in pairs from six to eight leaf-stalks, and on each side of these leaf-stalks there are little leaves about as wide as my finger-nail, and twice as long. They are green and slick on both sides, but the upper side is the greener and smoother. The young leaves are sometimes red when they are little. The blossoms on the honey-locust are of a yellowish-green color, and grow in spikes, as papa calls them. They are shaped like a bunch of grapes. The bees sit on the edge of these little flowers, and just lick up honey by the mouthfuls. The honey-locust bears a great long pod, or bean, from half a foot to a foot long; some of them are nearly as long as my arm. These pods, when they are little, look nearly like young beans; and when they are ripe, in one side is a lot of seeds that sometimes will rattle against the hull when you shake them, and in the other side is a sweet waxy stuff that I can't eat much of, as it gets strong in my throat in a little while. Well, now, have you found out the difference between these kinds of locusts yet? I will now tell you that one has thorns at nearly every leaf-stem, and lots of them on the body and limbs of the tree, and the other has no thorns on it anywhere. So you see there is quite a difference; but bark, leaves, and blossoms, are just alike, and they both bloom at the same time. They both furnish lots of honey. One of papa's swarms nearly filled the upper story of a chaff hive with honey from these trees in a week; then the blossoms all fell off. We extracted two gallons of locust honey from one swarm, and it is nearly as clear as water, and very good.

I like to look at the pictures in GLEANINGS, and on the covers too. We have young mustang grapes big enough to make pies. Ma makes them just as she used to make gooseberry pies in Indiana. They make good pies, but it takes lots of sugar to sweeten them. I will send you a can full of them; and if you like them I can send you some vines in the fall, and you can raise them; that is, if they don't freeze to death in the cold winter.

If you print this in GLEANINGS I will get another letter written some time. I can't write, so I got sister Mary to write my letter. If this is worth a book, I'd like Pilgrim's Progress. EUGENE D. ARWINE.

Bedford, Tarrant Co., Tex., May 21, 1883.

Many thanks, my little friend, for the grapes, and also for your very good and interesting letter. To be sure, you shall have Pilgrim's Progress, and we credit you with

$1.00 besides, which you can divide with sister May, if you choose. I should be very glad to hear from you again. We made a very nice pie of the grapes you sent.

JUVENILE·DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye, takin' notes;
An' faith, he'll prent it."

AND now it is the middle of June, children. Do you love June? Are the bees humming overhead with that peculiar sound that speaks so plainly of clover honey, around your house? Are you having swarms come out almost every day? and are the beautiful snowy-white combs growing every day in the section boxes? Are the green fields so inviting you can hardly stay in school? and is it almost strawberry time where you live? Is it fun to live? and do you thank God every day that he has given you the precious gift of life? I hope life is joyous to you all; for if it isn't, it certainly ought to be. David once said, "Great peace have they which love thy law." Well, now, if you haven't that great peace, I am afraid it is just because you do not love, and love to *study*, that law.

My pa has 12 stands of bees. He wintered them in the cellar, and they came out in good condition.
Doylestown, O. **DANIEL HOUT**, age 8.

We have 25 stands of bees; 7 of them are in Simplicity, and 4 of them are Italianized. Papa sold 11 stands, and he said he was going to send for a honey-extractor. **S. D. TUTTLE**, age 11.
Mill Springs, Ky., April, 1883.

My pa has 6 stands of bees. They are all in very nice condition. I help my pa work with the bees in the summer. **MYRTLE A. DAVIS**, age 11.
North Salem, Ind.

ELWOOD AND HIS GRANDPA.

My grandpa had 13 swarms of bees, but this winter one of them died. He had one hive in the cellar. He has a mill. I have one mile to go to school, but it is closed. Our nearest Sunday-school is about two miles. I do not go. I can answer your question. "And let us not be weary in well doing; for in due season we shall reap, if we faint not." Gal. 6:9; also II. Thes. 3:13. If this is worth a book, please send me Ten Nights in a Bar-Room.
ELWOOD SPRENKLE, age 8.
Wrightsville, Pa., April 18, 1883.

So you found the text in *two* places, did you, Elwood?

My brother Charley has 2 stands of bees, and he takes GLEANINGS. I like to nail sections together, and work with the bees; and I like to work in the garden. **EDDIE STEEN**, age 9.
Findlay, Ohio, May 27, 1883.

CHICKEN CHOLERA.

Tell Fannie M. Faris that we have used poke root for chicken cholera with good results. Pound it fine, and soak in water or milk over night, then mix with corn meal, and feed.
Bremen, Ind. **JOHN S. R. KUNTZ**, age 8.

Pa has one hive of bees. I like to gather eggs when I can get a lot of them, but I got only 27 tonight. Our dog eats some of them when he can find them. **MATIE D. FERGUSON**, age 9.
Clarence, Ia., Apr. 9, 1883.

A NEW KIND OF FUEL FOR SMOKERS.

Papa uses buckwheat hulls to burn in his smoker, and thinks it is the best stuff for smoke. He puts a little green grass in the top to keep it from throwing sparks.
Drinker, Pa. **STELLA T. FISHER**, age 10.

Answer to Ada Finch's question, Who washed his steps in butter? It was Job. How many persons mentioned in the Bible died twice, and who were they? **KATIE PURDY.**
Westover, Ont., Can.

And now, Katie, please tell us what Job meant by washing his steps in butter.

THE SWARM IN THE GARRET.

I am a little orphan girl. I live with my uncle and aunt. I help my uncle with his bees. He has a big swarm in the garret of the house. One day they came into the sitting-room through a little hole in the wall. We feed the bees sugar and honey.
Staunton, Ind., April, 1883. **ANNE CASPER.**

We have two swarms of bees; one of them is mine and pa's. Pa is a mason, and works in stone. He is afraid of bees, and they sting him. Ma and I have to take care of the bees, and pick berries in the summer. I have a sister in Chicago, and I am going to stay over there two or three weeks this summer.
FRED A. CULVER, age 13.
Benton Harbor, Mich., April, 1883.

I thought of writing sooner, but I had no spare time, as I had to go to school. I like bees very much, and hope to be a bee culturist some day. I am in the fourth reader, and like to go to school, because we have a kind teacher and good schoolmaster. I like to read good books.
W. H. TILL, age 11.
Allegheny, Pa., March 5, 1883.

HIVING BEES.

Draw a long woolen stocking on the end of a pole; and when the swarm begins to settle, place the stocking where the bees seem thickest, and hold it there until it is completely covered with the whole swarm. Have a sheet spread, and then lay the pole, or, rather the stocking, on the sheet in front of the hive. **ANNA E. KOSER.**
Milford, Ill., May 13, 1883.

HENRY'S OLD BLACK HAT.

My pa has 7 stands of bees. I help work with them. When the bees swarm I hang my old black hat on the fence. But there is never a bee goes about it. There, now, you may have it at what it's worth. My pa was going to send you a letter, and I thought it best to put mine in with it.

Sands, N. C. HENRY C. HAYES, age 8.

That's right, Henry; I am glad you did. Is it the black hat I may have, or the letter?

GETTING THE HONEY OUT THE OLD WAY.

My father found a swarm of black bees in an old oak-tree. In the latter part of September he took the honey out. In the evening, after they were all in the tree, he smoked them with flour of sulphur, melted, and fastened to a pole with a cloth on the top of it, and on the cloth he put the sulphur; he then set it ablaze, and put it in the entrance of the tree. That killed them all. The next morning he climbed up the tree and cut a hole into it, and then took out the honey. This is my first letter.

Creston, Ind. JOHN R. RIEBE, age 13.

JENNIE AND HER MOTHER.

My brother has about 16 hives of bees, and he got a great deal of honey. He got the first premium at the State Fair twice, and at the County Fair once. I have an elder sister, but she is going to school, and there are none but mother and I to do the work. We are cleaning house now. We take all the things out of a room, and clean them and the room, and then put them back again. I feed the chickens, and gather the eggs. We have a fruit-drier. I wonder if it would not do for an incubator.

JENNIE MCBURNEY, age 11.

Primrose, Pa., Apr. 20, 1883.

HOW DORA'S FATHER MADE AN ARTIFICIAL SWARM.

I like you, for I think you like little children. I have two little sisters; we have 18 colonies of bees; we winter them in a cellar; this is the second winter we have kept bees. Our cellar is quite damp. Last summer we had a colony that swarmed out three times, and went back every time; then papa examined them, and he found that they had four queen-cells just ready to hatch; then he divided them, and took one of the cells and pulled the top off, and let her out, and then put her into the new hive, and they did well. DORA STOUT, age 9.

A SWARM COMING OUT IN THE RAIN.

Dora has written such a long letter, I think she needs a red light held up to her. I am going to help papa tend to his bees this summer. One day our bees swarmed when it was raining; and before we could get them in a hive it rained quite hard. I guess my papa will send to you for an extractor.

LEONORA L. STOUT, age 7.

Richland Center, Wis., March 30, 1883.

I am glad you remember the "*red lights*," Leonora; but I hardly think Dora needs one, for she has given us a good plan to divide a hive; and then you know, too, she is an especial friend of mine, isn't she?

AN IMPORTANT (?) FACT FOR BEE-KEEPERS.

I read in the JUVENILE that you would give a book for any fact in bee culture not generally known. As my pa did have some bees, I asked him if he knew a fact not generally known, and he said he did, and it was this: "If you do not take good care of them in the cold winter they will all die, just as mine have this winter, because I did not take care of them and fix them for winter." I am not yet fifteen years old, but shall be soon, so I send you five cents for a book; and if my fact is of any use to bee-keepers, you will please print it and send me two books.

BERTIE TILLINGHAST.

La Plume, Pa., March 11, 1883.

Sure enough, Bertie, the fact you give is an important one; but I am not quite sure it is not generally known. I rather think your father smiled a little when he gave it to you, did he not? Never mind; it is good, any way.

LETTER FROM A FIVE-YEAR-OLD LITTLE GIRL.

I help papa clean off old section boxes, and pick up the scraps of wax when he is making comb fdn., and put them in the wax-extractor. I help him all I can. ELLA B. KINCADE, age 5.

HOW MINNIE HELPS HER PAPA, AWAY DOWN IN ARKANSAS.

I see you are so kind as to give the children a book, and so I thought I would write to you. I like to help papa with his bees. He has about 80 swarms. The bees are working very fast on willow and cottonwood trees and wild flowers. I help papa clean off section boxes, and help put in fdn. guides in section boxes, and also help make fdn. on plaster molds of papa's own construction. The next day after he made his plaster molds he saw some advertised in GLEANINGS, just like them, only yours are made of metal. Papa ordered a $25.00 fdn. mill of you on the first of March, and waited until the first of April, and it never came, and so he had to make some fdn. on his old molds that he had last year. The bees were so near swarming that he had to have some to put in his new frames for this year's swarms.

MINNIE L. KINCADE, age 8.

Sterling, Ark., April 4, 1883.

A CAT STORY.

This time I write about a cat belonging to the same neighbor as the dog which I wrote about in my first letter. The cat was watching a rat which was in between the lining and the siding of the barn. The crack through which the cat saw the rat was not big enough for the cat to get even its head through. The man stood and watched it for quite a while. He expected to see the cat bump its nose, but it did not. When it got ready it gave a spring and stuck its paw in and knocked the rat out and then killed him. IRVIN ADKINS.

A HORSE STORY.

My uncle, who lives in Omaha, once had a horse which was very knowing. One day the horse went down to the blacksmith's, and held his foot up to be shod, and would not go away until he was shod. So the blacksmith shod him, and then he went home, and his master had the bill to pay.

ALTIE V. ADKINS, age 10.

La Porte, Ind., April 7, 1883.

Well, now, Altie, that is a wonderful case of intelligence in the horse; but if you will excuse me, I am almost inclined to think it sounds a little more like a fish story than a horse story. Did you hear your uncle tell that, and are you sure he did not tell it for fun?

MINTA'S LETTER.

Well, Uncle Amos, here I am again, trying to write another letter, but am not at all pleased, because my other letter was not printed, and I guess I shall have to be put in the Growlery. Now, Uncle, I am not at all afraid but that you will print it if it goes until next year, for I suppose you have so many you have to lay some of them by for next time.

Brother Henry's Italian swarm wintered strong and well; the queen has many young bees. Henry says he thinks it will swarm before long. He hardly thinks of any thing but his bees. He had good luck with them through the winter, while the rest of us lost one. I had one, and that died too. I want to know if there can be three or four queens in one hive, as long as there are drones.

I go to school. We have a lady teacher, and she *is* a teacher, I tell you. When she speaks to the boys, and words won't do, she tries something else. She has one eye on her work and one on the boys, and sometimes she suddenly has one of those boys out on the floor by the collar or ears or something else.

I bought a pet lamb this spring, which feeds from a bottle, and my sister Caddie and I bought one for our sister Nellie.

Please send me a few of those cards, "Jesus, teach me not to swear," etc. I want to give it to some boys who come to our school, who swear; they are a disgrace to the school. MINTA F. MISER, age 10.

Mantua, O., June, 1883.

There are sometimes two queens in a hive, Minta, but very rarely three, unless it is just about swarming-time, when a lot of them happen to hatch out all at once, and go out with a second swarm. As a rule, each hive has one queen, and no more.

MAKING HIVES BY HORSE-POWER.

My pa has 70 stands of bees. I like them. My brother takes GLEANINGS, and I like to read it. My pa has a mill for making bee-hives. I like to drive the horse in the mill. MARY L. BEDELL, age 11.

My pa has not unpacked his bees yet. They are packed in chaff. He has a mill for making the slats for boxes. We have a new house, and we are building a barn. We keep about 20 hens. I set two, and so did ma, and we are going to see which has the most. If you think this is worth a book, please send Rescued from Egypt. EDITH BEDELL.

Kawkawlin, Mich., May, 1883.

FROM 2 TO 13, AND 200 LBS. HONEY.

Last spring my pa started with two hives, and now has 13 stands out of those; he got a smoker of you. He likes it very much. A bee stung me on the nose, and it hurt. My pa took 200 lbs. honey from his bees last fall, and left their hives full to winter on.

Bloomington, Ill. ROY C. HAYES.

Well, here we are again, just the same as ever. How are the bees? Ours are all right. They are gathering honey from gooseberry and cherry blossoms, etc. We have 4 canaries—2 little ones and 2 big ones. We had six, but one died, and the cat killed one. One of our hives of bees swarmed out the other day, and they tried to go into another hive, and the other bees killed the queen.

Danforth, Ill. LIZZIE JOHNSTON.

My uncle John keeps bees. He had 40 swarms, and three of them died. This is the first letter I ever wrote to you, and I read in the third book. My pa died about six years ago, and I live with my uncle John. He got some Holy-Land bees, and he thinks they are the best. FANNY EDITH LEE, age 9.

Stevensville, Ont., Can.

Pa has 10 stands of bees, and ma has 2 stands. Pa feeds his bees syrup made out of granulated sugar. One warm afternoon they carried in 8 lbs. of sugar made into syrup, in one hour. Pa wintered his bees on their summer stands, and he did not lose a stand. They are all in good condition this spring.

MARY B. COLEMAN, age 12.

Kinderhook, O., March 20, 1883.

BEES AND BEE-TREES.

I do not know much about bees, but pa says they are awful nice to work with, if they would not sting. A neighbor of ours was bragging about a bee-tree on his place, but he did not brag long, for a number of young men, or rascals, went and cut it down. He was awful mad about it, but could not find out who did it. WILLARD W. LOCIE.

Consecon, Ont., Can., Mar. 7, 1883.

Papa has 84 swarms of bees in a cave, dug in the ground, and 11 out of doors. He has had them out all winter. They have got big boxes over them. He wants to see which way is the best to winter bees. I have two brothers, Fitz and Fred. Fitz goes to college, and Fred wants to be a bee-man.

EVA FARRINGTON.

Strawberry Point, Ind., March 7, 1883.

Very good, Eva; but won't you tell us now which *did* winter best?

My brother Charles has 16 swarms. He has one Italian swarm, and is very proud of them. They are such industrious and economical fellows. He has one swarm of Holy-Lands, but it was late in the fall when he started with them, and we can not tell much about them yet, except that they do not like their neighbors. If one enters their hive they seize him and escort him out instantly.

WALTER H. LARRABEE, age 10.

Horton, Mich., March 21, 1883.

BEES AND TOBACCO.

When any one who uses tobacco comes here to see the bees, they get cross, and will sting, so mamma says. CARRIE BELL PROSCHER, age 5.

La Grange, Fla., May 3, 1883.

Well, I declare, Carrie, you have given us a very valuable fact in both medicine and bee culture, haven't you? Now I think I can guess pretty sure that your papa doesn't use tobacco; am I not right? So you see I was all right, wasn't I, when I decided, some years ago, that bee-keepers ought not to use tobacco.

I live with my uncle. He has 16 hives of bees. He had 20 hives, but he lost 4 in wintering. He has the chaff and Simplicity hives. He got about 300 lbs. of honey last summer; he extracted some. My aunt and brother hived a swarm of bees a year ago last summer. They made 3 lbs. of honey in sections, and enough to winter them. I helped my uncle when he extracted honey. We children eat the cappings. I like to help him work with the bees.

EVA JAMES, age 13.

Kellseyville, Ind., Apr. 4, 1883.

Now, Eva, I wonder if the secret of your liking to help so well, about extracting-time, has not something to do with those same cappings. I have seen children before who liked cappings; and, come to think of it, I don't know but I have seen some grown-up folks who had a way of getting their fingers in among them.

I like honey, and molasses too. One day I found a screech owl in a hollow tree. My father has no bees, but grandpa has. JOHN E. ALVIS, age 13.

Montrose, Ia., March 20, 1883.

I have read the letters in the JUVENILE, and like them. My uncle takes GLEANINGS. He keeps bees. He has one colony upstairs. I saw the queen last summer, on the comb. PEARL LAWSON.

Staunton, Ind.

UPWARD VENTILATION.

Bees have wintered well so far. Father left the top story on one hive, and thinks it is in the best condition of any. He thinks top ventilation is quite important for successful wintering.

MILES G. WYTH.

Townsend, Mass., March 12, 1883.

A SIX-YEAR-OLD FRIEND TELLS US WHAT HAPPENED WHEN HE WAS A "LITTLE BOY."

MY PAPA HAS 15 SWARMS OF BEES. WHEN I WAS A LITTLE BOY I WENT OUT WITH A STICK TO PLAY WITH THE BEES, AND THEY DID PLAY WITH ME UNTIL I MADE A BIG NOISE, WHICH BROUGHT MY PAPA IN A HURRY. THE NEXT DAY I COULD NOT SEE OUT OF ONE EYE, AND THE MINISTER WAS HERE, AND HE LAUGHED. WELL, I SHOULD LIKE JACK THE GIANT-KILLER.

FORREST L. COLBY, AGE 6.

ENFIELD CENTRE, N. H., MARCH 12, 1883.

Well, I don't wonder very much that the minister laughed, Forrest, for I think I should have laughed too, especially if it all happened when you were only a *little boy*.

HOW TO CURE LEFT-HANDEDNESS; BY AN OLD JUVENILE.

I want to tell "Left-handed Laura" and other juveniles how my teacher broke me of writing left-handed. He set me a copy. I went to my desk (just promoted to one), feeling very important. I took my pen in my left hand, of course, as I was left-handed, and I was trying my best to make straight marks, when the teacher's fist came violently in contact with the right side of my head, and I lay sprawling in the aisle. As soon as I could, I got on my feet, when the teacher (?) opened his mouth, and spoke thus: "Young man, never let me see a pen in your left hand again." And I didn't. Children, how do you like that kind of teaching? I am a little boy of 5, with a 0 at the right-hand side of it. Mr. Root, is there any thing about bees in this? If there is, I want a book. C. E. McRAY.

Canon City, Colorado.

Friend M., we can all of us thank God that such ways of guiding the infant mind are now happily, at least for the most part, passed away. Reason, kindness, and love, are first tried, and severity, if ever needed at all, only as a last resort. What would be done with a teacher now days, were he to attempt to cure urchins of left-handedness after that fashion?

SOME INDIAN STORIES.

I have been very much interested in hearing my parents tell about the Indians that inhabited this St. Croix Valley about 30 years ago, and thought some of the JUVENILE readers also would like to hear something about them. Before the St. Croix Valley became a wheat-growing country, the steamboat used to bring loads of flour from St. Louis. One time it brought up a load of lime, and a party of Chippewas thought it was flour, took one barrel, and carried it twelve miles into the woods, and when they got to their camp and opened the barrel they were very much disappointed. At another time they stole butter off the steamboat, and ate nothing but butter while it lasted, and it made them all sick, so none of that tribe will eat butter. There is an old squaw living near this village, called Mindy, and she (like all the other squaws) is a very neat sewer. Once a tribe of Sioux came here and got into a fight with the Chippewas, and Mindy got stabbed, and thought she was going to die, and so she sent her boy with a very nice patchwork quilt to my sister. She soon recovered, and sent her boy after it.

St. Croix Falls, Wis., Jan. 8, 1883. EVA AMERY.

THE TYRRELL BOYS AND THEIR BEE-KEEPING.

I received your GLEANINGS, of which my grandpa made my brother and I a present. We had 10 colonies of bees last winter, and increased to 21. We lost one. My brother and I kept up with them as far as the marsh. We were barefoot, and could run fast. We saw which way they went into the woods, but we couldn't find them after. We sold one to Mr. Shum, and one was robbed by the bees. I made hives to raise queens this summer.

W. E. TYRRELL, age 11.

THE SWARM IN THE HEDGE.

My brother said that we kept bees, so I will tell you about a swarm of bees. A farmer came and told pa that there was a swarm of bees in a hedge fence on his farm, and that if he came out and took them away he could have them; but pa was busy for a week, and could not go and get them. The bees had built combs the size of a half-bushel in among the limbs, and there wasn't a bit of shelter over them. Pa got the bees, but no honey, for some one had been there the night before, and had built a fire of green corn-stalks, and had smoked the bees up on the upper limbs, and then took the honey. They were the gray bees. They are in a hive in our apiary. They have a good supply of honey for winter.

La Porte, Ind. CHARLES R. TYRRELL.

SAMMIE'S QUESTIONS, ETC.

Mother takes your journal, and I have been reading some of the letters from your little friends. I should like to be one of your friends too. My pa had several stands of bees, but the moths killed them. My brother has four bee-trees in the woods, and we should like to know the best way to get them out, and what kind of a hive to put them in. Mr. Root, can you tell me how the bees make their wax? One of my neighbors has a stand with wire cloth over one side, so that you can look at the bees at work. When they come in with honey they back into their cells. What makes them do that way?

Penn, Fla. SAMMIE R. BOWEN, age 13.

I shall be glad indeed, Sammie, to take you into the circle of little friends, for there never can be too many of us while we are seeking to tread in wisdom's ways. Now I wonder if some of the other little friends could not answer some of the questions you ask. Is it probable that the moths really killed the bees? What shall her brother do with his four bee-trees, and what kind of a hive shall he put the bees into? How do the bees make wax, and what do they back into their cells for? Who can give us some light on all these points?

HOW CORA'S FATHER GOT HIS HIVES NAILED UP AND PAINTED.

Father has 21 swarms of Italian bees; he also received the 25 Simplicity hives. We had quite a time getting them set up; but after we got one up we were all right, and now father is transferring them to our new hives. They look very pretty; we painted them white. We are very proud of them, as there are no hives here like them, except those of our neighbor, perhaps. CORA BEAR.

Beaver Creek, Col., May 15, 1883.

A CAUTION TO COMB-FOUNDATION MAKERS.

We have been making comb foundation for three days, on the machine pa got of you last spring. We had quite an accident while we were making it. Last night a pail of wax was sitting on the stove melting. The stove was very hot, and the wax boiled over; it immediately caught fire, and blazed to the ceiling; but we soon got the pail off the stove, and got the fire put out. The bees are hard at work.

MARY WINDSOR, age 12.

Leamington, Ont., Can., May 30, 1883.

HOW EDDIE MADE A SWARM CLUSTER.

One day in July, as I was standing in the stable-door, I heard the bees flying over; so I ran after them, and threw sand and rocks at them till they began to settle on a tree. As soon as they were all settled we cut the bush down and got them hived in a box, and took them home. This was the 29th of July, the first year. That year I took no honey; this year I took about 70 lbs. from the old one, and it swarmed three times; from them I took no honey.

EDDIE H. SHERMAN.

Fillmore, Iowa, Feb. 11, 1883.

I have been wanting to write to you a good while, but I could not write very well, and mamma was sick, and she told me to wait until she got well, and she would show me how; but she never got well. She died a little while ago, and we are left without any ma to take care of us, so I had to write this myself. I did love my dear mamma so much; but I still have a good papa to take care of me. Papa's bees are at work on the clover.

LILLIE MANUEL, age 10.

Alma, Ark., May 10, 1883.

May God bless and comfort you, my little motherless friend Lillie.

A SAFE KIND OF PARTNERSHIP.

Pa and I are partners in bee culture. We have got 15 hives—13 in Langstroth, and 2 in old box hives. We are going to transfer the two as soon as we can. The bees are so bad about robbing this spring, that it is almost impossible to handle those that have much honey. Our bees have been doing badly until about a week ago. Our bees did well last year. We got about 800 lbs. from 8 hives, all comb honey. I help pa work with the bees. I am not afraid of them. Ours are all blacks. I will tell you some time how pa and I came to be partners in our bees. WIBY DELLIS, age 13.

Hubbard City, Texas.

LEROY'S OPINION ABOUT THE ITALIANS, ETC.

Pa has six swarms of bees—four black ones, and two Italians. I think the Italian bee is the best when they can steal their food. The black bee works earlier and later in this country. The Italian bee can not stand the cold as well as the black bee. The queen is always guarded by other bees. Pa says I must watch the bees this summer, and he will give me ten cents for every swarm I see first. I think they are going to swarm in about one week.

LEROY ROBBINS, age 11.

Watsontown, Pa., May 22, 1883.

HOWARD'S LETTER.

My pa has 8 stands of bees. I have one black one. I want to raise a yellow queen, and pa's bees are all Italians but 2. We had a swarm; we put it in a Simplicity hive, and it stayed only 4 days, and then came out and went off. I have heard that a bad beginning makes a good ending. I hope that will be the way with us. The bees are real cross; but we have a smoker, and we will tame them.

Answer to Annie Cameron's question, How often is *yes* used in the Testament? I can find it but once. It is in Matthew 17:25. What two chapters in the Bible are alike? HOWARD FISHER, age 12.

Franklin Mills, Pa., June 4, 1883.

HOW TO MAKE THE BEES TAKE HONEY THAT IS CANDIED IN THE COMBS.

My pa keeps bees; he has 27 stands. He winters them in the cellar; 2 died; he made a hand-barrow, and I helped him carry them out. He has them in the Simplicity hive and L. frames. He makes them himself. He has one stand of pure Italians. The rest are blacks; he paid $3 00 for the queen last fall. He bought her of Mr. Williams, of the Railroad Apiary, Berkshire, N. Y. Pa puts brown paper on top of the frames, instead of cloth. I will tell you how to make the bees work over candied honey; that is, in old combs. Uncap it, and sprinkle water on it, and the bees will take it all out clean.

ALBERT D. SMITH, age 9.

Caroline Depot, N. Y., May 21, 1883.

THE ROCKY-MOUNTAIN BEE-PLANT IN ITS NATIVE HOME, ETC.

My father has 18 stands of bees. They are all Italian. He got the hives, and I helped him set up brood and honey frames; I set up 200 sections in 3 hours. I have a brother-in-law who, when he sees a bee, will run, for he is afraid of them. I am not afraid of bees. I can go among them without my bonnet on, and not get stung. My father is transferring his bees into the new hives. One day not long ago he went to go across the river, and found a large swarm of bees in a tree. They had 30 lbs. of honey. I see in your A B C the Rocky-Mountain bee-plant. This same plant grows abundantly here, and in all the valleys of the Rockies. The bees work on it. JESSIE TOOF.

Beaver Creek, Col., May 14, 1883.

SUB-VENTILATION, ETC.

Papa sub-ventilated his bee-cellar this past winter. When the thermometer stood 16° below zero outdoors it was 43° above zero at the mouth of the pipe in the bee-cellar; therefore it gained 59° while passing through the pipes under the ground. Papa put 153 stands of bees in the cellar last fall, and found but one dead when he took them out. Mamma calls our place "Honey Grove," because papa has kept bees here for 22 years. Don't you think that is a nice name? I like to work among the bees with papa and mamma. Last year I assisted in putting fdn. in supers; I also extracted honey, and expect to help this season. When the JUVENILE comes, papa hands it to me and says, "Here, Viola, is some mail for you," and I like to read it.

VIOLA E. OREN.

Mt. Auburn, Benton Co., Iowa, April 2, 1883.

PEARL'S LETTER, AND ALL ABOUT THE FOLKS AT HOME.

I help my uncle go through the bee-hives, and I saw two queen-cells in one hive. My aunt is going to get some more bees. We have no bees. My ma has 65 little chickens; my pa is a blacksmith; we have a good cow, and I have all the milk I want to drink. My ma is going to make an incubator out of an old turkey-hen. I have a brother five months old, and I have a sister 7 years old.

PEARL LAWSON, age 9.

Staunton, Ind., May 21, 1883.

THE WAY THEY PUT IN STARTERS AT "ABBIE'S HOUSE."

Mamma has 9 swarms of bees, and I have one which she gave me. My papa doesn't like bees very well. He doesn't like honey; because he says it is too sweet. I was out with mamma, helping about the bees, and one stung me, and I said it was a stingless bee now. I have seen the bees come to their hives and would be laden with pollen, and they looked nice. I have seen the bees, and have seen them gather honey. We were getting boxes ready for a swarm, and we put in starters, and I would hold the comb over the stove and let it melt just a little, and then put them into the box, and they stuck, and we had good luck. The bees have gone to work in the boxes. We use pieces of comb for starters. ABBIE E. FREEMAN, age 14.

Guildhall, Vt., May 25, 1883.

SUSIE'S LETTER.

Pa keeps bees. I am the only one to help him; the rest are all afraid of them. I have two little sisters younger than myself; one of them is 6, and the other 7. My ma died when I was 7, and then pa got grandma to live with us. Grandma died last fall, and pa broke up housekeeping, and sent me off to school about 20 miles from home, and took my little sisters out to grandma's. Pa is keeping house again, and we were all glad to get back home. We haven't any school this summer, but grandma sends me to Sabbath-school except when it rains, and then my little sisters and I have Sabbath-school at home. We sing a hymn, and then we read our lessons.

SUSIE IMBROSE, age 10.

Ash Ridge, Wis., May 28, 1883.

Susie, I most strongly commend your plan of passing a rainy Sunday; and may God bless all of your little household.

ORSIE'S TROUBLES AND RESOLUTIONS.

I am 5 years old. I can not write, so I have my sister write for me. I fed the bees rye flour, and I got stung, and I do not think I shall be a bee-man. I think I will be a horse-jockey. I have a colt one year old. I go to school, and get cuffed every day. I wish you would send me one of those books. Please send me Ten Nights in a Bar-Room.

ORSIE P. KINGSLEY.

Comstocks, N. Y., May 24, 1883.

You got stung by the bees, and cuffed every day at school; and then decided you would grow up into a horse-jockey, did you, friend Orsie? Did you ever hear of "jumping out of the frying-pan into the fire," my young friend? Seems to me that is what you propose doing, do you not? I like horses, and I like horses that can go fast; but that word "jockey" I don't quite like to see a boy resolve to take upon himself. Suppose you look in the dictionary, friend Orsie, and see what a jockey is. When you find it, tell us whether that is what you are going to be.

HOW FRANK HIVED HIS FIRST SWARM.

I just captured my first swarm of bees. They came out and I settled them. And then I took the swarming-box, got them in it, and one stung me in the eye, and on the tip of the nose, and then I dropped the box that they were in, and ran away, and then I went back again, and got 'em and hived them.

SWARMING-BOXES; FRANK'S SUGGESTIONS.

You must not make your swarming-boxes so heavy for little boys; the box was so heavy that I could hardly carry it, and after I had them in the hive about a half-hour they came out, because they didn't have any honey, and then they alighted in one of our cherry-trees, and then I got them in the swarming-box, and put them in the hive the second time, and gave them some honey, and now they stay. If you think this is good enough, please send me a book, Ten Nights in a Bar-Room.

Eureka, Ill. FRANK SCHEIDEL, age 11.

It is tiptop, Frank, and I believe you are half right, for I have been thinking of a willow basket made just right, instead of the heavy swarming-box. Who can give us such a basket, by the thousand?

THE HAASS CHILDREN, AND HOW SYBILLA'S FATHER HIVES BEES.

My father has 42 stands of bees in box hives, and if they swarm we take tin pans and beat on them, so that they can not hear the noise which the queen makes, and then they will settle on the first limb that they can come to. We then sprinkle some water over them, and take the hive, and hold it under them. We take some green bushes, and then we can hive them. My teacher gave me the JUVENILE to read, and I read it with much pleasure. I do not think I deserve a book, but still I should like to have one. I can read and write German, as well as English. I should be glad if you would print my name; I never saw it in print before. I think it would be very nice. SYBILLA HAASS, age 12.

Well, Sybilla, I think we can afford to print any little girl's name who can read and write both English and German.

My teacher gave me the JUVENILE. The bees begin to work here in Texas in February and March; they get their pollen from the elm-tree blooms; and in May they get it from the wild china and prickly-pear flowers. The name of it is cactus, but we call them prickly-pear. Did you ever see a prickly-pear flower? They look beautiful; they are of two different colors — red and yellow. My teacher has ten Simplicity hives; they are the first I ever saw. His bees are blacks. ANNA HAASS, age 13.

My teacher told me to read the JUVENILE, and see if I could not write a letter. My papa tried to keep some bees once; he had one swarm. The queen took the lead, and then the rest followed. Papa knows a swarm in the woods. It has no honey yet. I will tell you from what kind of flowers they get it — prickly-pears, and elm, cherries, peaches, and oleanders. They are red flowers. I don't expect a book, because I did not tell you much; but I should like to have one. LOUISA HAASS, age 11.

Francisco Perez, Medina Co., Tex., May 24, 1883.

THE REASON WHY ALL THE LITTLE LETTERS DIDN'T GET PRINTED, ETC.

You will find the word "butter" in Isaiah 7:15, 22. I wrote you a letter in Dec. last; you never printed it, nor sent me a book. If you do not this time, I will not call you "uncle." Father has 26 stocks of bees—17 in Root chaff hives, the rest in Simplicities, packed in sawdust, on summer stands. They had a fly, March 2, and were all alive then.

WM. J. PURDY, age 7.

Westover, Ont., Can., Mar. 12, 1883.

I am sorry, William; but we had so many letters then that I couldn't find room for them all. Don't you see we are getting back to them now? Your letter above is away back in March. You see, when it is cold weather, and the children are kept indoors, they write a great many more letters than they do at this time of the year, and so we shall have to go back and take up the old ones. Can't I be "uncle" still? We surely did send you a book, William, and, as you say you didn't get it, we send one again.

CLARA'S DESCRIPTION OF THE WAY HER MOTHER CURES THE HEN CHOLERA.

I read in JUVENILE, of some one inquiring about curing chicken cholera. Boil thick milk, and stir in wheat bran while boiling hot; feed them while warm; feed this every day until well, and then twice a week through the season. Ma has had good luck with this for 8 years. I have 3 brothers and 2 sisters and one little niece. She has blue eyes. Ma and I stop the bees when they start off, by going ahead of them, and throwing water up. Pa has 20 colonies of bees; they are doing well. CLARA PHEISTER.

Etna Green, Ind., April 6, 1883.

Well, Clara, there is one thing about your remedy I like very much, and that is, it is something that wouldn't hurt a hen, if she wasn't sick at all. In fact, I am inclined to think boiled milk and bread would cure a great many diseases of human beings as well as fowls, if they took it in place of doctors' stuff.

LULU'S BEE-STORY, AND SOMETHING ABOUT DUCKS ALSO.

In the spring of 1881 my father found a swarm of bees, and where do you think he found them? About six miles from here, between the siding and plastering, up close to the eaves of a house. He cut a hole in the plaster, took them out, put them in a box, and brought them home; they had only four by sixteen inches, but of course their hive was quite long enough. They had built comb down about two feet. They were very black. We now have three new swarms from them, all nice Italians. The funny part of the story is, they had wintered there when two-thirds of the bees about here died. Pa says there have been bees in the railroad water-tank in Adams, the last three years. He keeps ducks to help the bees kill moths. He thinks most of them, next to the bees, of any thing we have on the farm. They watch as a cat watches for a mouse, around the hive, and catch the millers. The bees never sting them, as they do the chickens and turkeys. We have the prettiest duck. He is as white as snow, and has a big top-knot. We call it his cap. His name is "Ole." LULU A. BISBEE.

Lyle, Minn.

A COLONY OF BEES UNDER THE HIVE.

My grandpa keeps bees, and has for over 40 years, or ever since he lived in Illinois. Last fall he and a friend were out looking at them, and, happening to look under a hive, what do you think they saw? A swarm of bees had gone underneath the hive (he uses the L. hive) some time during the summer, and had several combs built from the bottom to the ground, containing supplies, ground cleaned off and coated with propolis. It was late in October before they were discovered. My pa went in November, took them out, put them in an L. hive, and brought them home, and they wintered nicely. My pa takes all the bees that folks in our neighborhood are going to kill with brimstone. He says he can't bear the idea of having the poor little fellows killed. He feeds them on frames of honey, and usually winters them as well as any of his bees. He now has 34 colonies; lost 36 in wintering. PEARL GRAVES, age 11.

Duncan, Ill.

So they undertook to coat the ground with propolis, did they, Pearl? I should have thought they would have fared badly when it rained. I commend the spirit of your pa in saving the poor little bees, and I am glad to hear that he usually winters them, as a recompense for his kindness in keeping them from starvation.

BOTTOM VENTILATION, ETC.

In the fall of 1880 pa packed 31 swarms in timothy chaff, with bottom-boards in, and had one swarm alive in the spring. He bought 4 swarms; increased to 16, and took 800 lbs. of extracted honey. In the fall of 1881 he packed in the same box, in oat chaff, with bottom-boards out. All came out strong in the spring. Pa says he thinks putting bees away to winter, with bottom-board in, kills more than any other thing. He put one swarm in the cellar where there was water within a few inches of the hive all winter, bottom-board off, just to try them, and they came out in the spring as bright as a new dollar. Last spring we bought 4 swarms; increased to 53; took 1300 lbs. of extracted honey, and in the fall packed 18 swarms in chaff boxes, and built outdoor cellar for the remainder. They are nearly all buried under the snowdrift. I think I shall be a "bee-woman" when I get big, for I like to work among bees. I often help pa when he is hiving, or extracting honey, and they hardly ever sting me; but if they do, it doesn't hurt more than a second or so.

MARIE L. BISBEE, age 12.

Lyle, Minn., Feb. 24, 1883.

Thanks for your valuable report, Marie. I see your letter came away back in February, and now we should be glad to know if your father found that leaving the bottom-boards off last winter was successful again. There is something a little mysterious about this matter of ventilation. While, a great many times, results seem to show directly that plenty of air saved them, at other times it seems equally plain that so much ventilation killed them.

A MOTHERLESS LITTLE FRIEND.

I go to school. My ma is dead. She died the first of March. My pa has sent for a bee-hive, but has not got it yet. I like honey very well. My aunt has got a postoffice. I live with my grandpa. I go to Sabbath-school when it is not too cold. If my letter is worth a book, I want Ten Nights in a Bar-Room.

Linn, Ia., March 10, 1883.

May God comfort you, my poor little chick. No wonder you forgot to sign your name, and no wonder that so many of these little ones in their loneliness write the sad words, "My ma is dead." Think of it, ye living mothers. The time may soon come when *your* darling, too, may echo these words. Are you sure that, in such an event, they will turn to Him who has said, "Suffer little children to come unto me"? Are you sure their teaching has been such that they would, in that case, turn to God the Father as the only hope of meeting with you again on that far-off shore? Little one, we did send your book, even if you did skip your name, childlike. "Lu," the mailing clerk, loves little girls, especially those who have lost their mammas, and she caught at what you said about your aunt being postmistress, and sent the book to you, in her care. Did you get it, and will you not tell us next time what your name is?

A CELLAR FULL OF BEES, ETC.

My papa has 8 stands of bees; all of them wintered well. He took off about 400 lbs. of honey, and sold and gave away about 200 lbs. Yesterday, when we came home from Sunday-school and church, we found the cellar was just swarming with bees. We could not walk around without stepping on them. One corner of the window-screen was torn off, and they got in there; but none of us got stung. What a time we had getting them out! We darkened up the cellar, and left the door ajar.

A HINT IN REGARD TO CHURNING.

May be some little girl has to churn for her mamma as I do. If she will put a half-pound oyster-can over the handle, so it will just cover the hole, it will not spatter at all, hardly.

MYRTLE HARTWELL, age 10.

Very good, Myrtle; but you didn't tell us what made the bees go into the cellar so; but if you didn't, I think I can. I think some of you left some honey, or some other sweet, that some stray bees got a taste of, and then there was fun. When they get into any room in that way, just get the honey away from them, the first thing. Shake it, and get every bee off, and then take it into some close room, or tie it up in a bag; and if you don't want to lose your bees, go and open wide every door and window, and let them examine the premises well, to see that there isn't another drop of honey to be had, and they will then very soon go home satisfied.

EVALENA'S QUESTIONS.

My pa keeps bees. He has lost one swarm this winter. His bees swarmed last summer, and went to the woods. Pa followed them to a tree in a neighbor's timber. The man cut the tree and burned the bees, after giving pa consent to cut it and save them. What do you think of a church-elder who would do such a thing as that? Our school was out yesterday. I worked through Ray's Third Part Arithmetic, and reviewed it, in four months. Pa has two more trees with bees in them that have wintered so far. What time would be the best to cut and transfer them to movable-comb hives? Is the Simplicity as good as the chaff hive? Do the frames of one fit in the other? EVALENA CHAPMAN.

Kilbuck, Ohio, March 12, 1883.

Why, Evalena, I should think that a church-elder who would do as you say, had got a little backslidden, or that his religion had grown rather cold. You don't want to have any man let his religion grow cold, do you, my little friend? It always makes me feel sad when a church-member forgets his religion, or seems to forget it.—I think the best time to cut a bee-tree would be about fruit-blossom time, for then the combs would not be very heavy with honey, nor would other bees be very apt to rob.—The inside, both of the Simplicity and chaff hives, are exactly alike, and so the same frame fits all. The chaff hive is better, because the walls are protected both from the winter frosts and the summer sun.

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GLATFELTER'S BEE-FEEDER.

I have been reading the JUVENILE and GLEANINGS for some time, to find out something about that bee-feeder I sent you. It finally came, pictured in May GLEANINGS, page 263, called "The Boy's Bee-feeder." I wish you would change the old name, if you please, and call it "Glatfelter's Bee-feeder, of New Philadelphia, Ohio." My papa has been trying all kinds of feeders, and threw them all away, except this one; it's just "boss;" can be used on any hive.

This is a bad spring for bees, it is so wet and cold; but the white clover is coming up finely, and I think we shall have a fine honey season. Papa went into winter quarters with 20 stands, and lost 6 in April. The reason, papa thinks, is that he commenced to feed them too soon. Some of them swarmed out, and some of the queens died. Oh! pa got a pound of bees in a little box, and a queen with them, from Alabama, and he is looking for some every day from Tennessee. Pa tried an experiment with one strong colony last fall. He gave them no upper ventilation, and they died. Pa's hives are all double-walled.

JAMES A. GLATFELTER.

New Philadelphia, O., May 22, 1883.

All right, James. I should have given your name before, but you did not write it on the bee-feeder, so I could tell what it was when I got ready to use it. I will cheerfully change the name. But are you not giving the invention all to your father, when it really was yours? Or are you and your father in company, like Wiby Dellis and his father, on p. 352? Your father's experiment, of wintering bees without ventilation, gave a very decided result; don't you think so, James? Your idea suggested, that feeding bees too early in the spring may sometimes kill them, is no doubt correct, and I am strongly inclined to think that by far the better way is to do the feeding in the fall, and then disturb the bees as little as possible, until they can fly freely.

HOW CHARLIE GOT HIS SWARM OF BEES.

Father has 7 colonies of bees. He got 3 just one year ago, and increased them to 6. We have one Italian stand of bees. Last fall pa found one hybrid swarm on a bush, and we had only one extra hive. Don't you think the bees knew we had that one hive? Pa has got his bees in the Langstroth hives, except one colony. One time when pa went away he told me every swarm that came off and I put into a hive I could have; so one swarm came off and settled on the cellar-door, and I put them into a hive. I have hived two or three since then. We have a feed-mill, and when we are grinding the feed the bees swarm all around and gather lots of pollen from the meal, to feed the young bees. We got lots of honey from our bees last year. Will you please tell me about that 75-cent telephone, and how far it will articulate? **Charles Turner**, age 13.

Hopkins, Mo.

"FUN" IN TRANSFERRING, ETC.

I have received your smoker on tobacco pledge. I think it is beautiful. I am very much obliged to you. You know I told you I have one hive of bees; they are in an American hive. I do not like that hive, so I thought I would transfer them into a Langstroth. My father is afraid of a bee. If one bumps against him he thinks he is stung. I got out the first frame, and shook the bees into the old hive. My father grabbed the frame and "lit" for the house. When he got half way out of range of the bees he said, "Fred, you'd better shut up the hive, or you will get stung to death." I didn't have any veil on. I got out three more, and shook them into the old hive; but about that time one "lit" on my eye, and stung me so that it shut up. It was swollen up so badly I didn't stop to pull the sting out. I didn't have any time for any thing. I got them all in the frames (the combs, I mean), and did the job all up, then went into the house, took the sting out of my eye; but the poison was all in my eye. I was about half an hour transferring, so you see I got all the poison in my eye. But you must remember that this is the first time I ever tried transferring. I am not afraid to try it again.

Some of the bees got up my pants leg, and then I had fun. Didn't I jump? well, I should "smile."

Fred R. Thompson.

Quincy, Illinois, May 4, 1883.

VICTORIA FIELDS AND HER BEES.

I was out early this morning among the bees. However, I must tell you that I was going to request a place in "Blasted Hopes;" but since the weather has got warm, my hopes are getting better. You recollect in my last letter I said the bees of one hive spotted the snow on a warm day. Well, I commenced to feed them sugar syrup, but die they would, and die they did. They had about 20 lbs. of sealed honey when they died. I had thought of getting a pound of bees and queen this spring; but papa not being able to work, I shall have to wait until some other time. Myrtle, my little sister, over 3 years old, will walk right up to the bees, and play among them, and I have never known her to get stung yet. I always work among the bees with bare hands and bare head; and in my two or three years' experience I do not think I have got stung half a dozen times. Did you ever know a colony of bees to die with dysentery, and have young brood at the time? Ours had. I noticed on one piece of comb several cells with brood.

I like to read "Myself and My Neighbors" in the **Juvenile**. According to Mr. Hasty, Virgil, a great many years ago, understood practical bee-keeping pretty well, or the theory, at least. We have had no swarms yet this season; but the bees are building up strong, considering the weather, which has been cold and wet, cloudy and gloomy, all spring.

Victoria J. Fields.

Valley Point, Pa., May 31, 1883.

Yes, Victoria, I have known a great many bees to die of spring dwindling, with brood in the hives. In fact, I believe that is the way they almost always do. I am glad you are not discouraged at your bad success in wintering.

KIND WORDS FROM OUR CUSTOMERS.

The A B C book has been received. The "get-up" of the book is very neat. **J. H. M. Barritt.**

Criswell, Ga., March 31, 1883.

The Waterbury watch I got with **Gleanings** is a little wonder, sure. Keeps good time.

Tiffin, O., Apr. 9, 1883. **Marcus Holtz.**

I was going to grumble about the delay; but the stuff is so nice that I am *more* than satisfied.

Holmesville, O. **W. P. Coleman.**

Send me one cake of that maple sugar for a sample; also one of the nicest cakes you can pick out, for somebody I know of. **D. E. L'Hommedieu.**

Colo, Iowa.

OUR 25-CENT SILVER THIMBLES.

I have ordered three silver thimbles of you before, and am very much pleased with them.

Yankton, Dak. **Ellen G. Fitch.**

I received my hives last Saturday. I found every thing all right, and the lumber was much better than I expected. **Ira D. Krass.**

Jackson, Mich., May 24, 1883.

GLEANINGS AS AN ADVERTISING MEDIUM.

I have sold all the bees I had for sale. The last lot I sold to Mr. Oatman, Dundee, Ill., 100 colonies.

Jefferson, Wis., May 12, 1883. **C. Grimm.**

I received the goods a few days ago. They are all that could be expected for the money sent. All of the household articles are excellent.

S. C. Frederick.

Coal Vale, Kan., March 25, 1883.

That fdn. mill is just splendid; all O. K., and the goods gave much pleasure and joy, as they were so neat, nice, and cheap. Hives, frames, etc., are perfection. The ground is one sheet of white clover, and honey and swarms are pouring in. Please accept thanks. **F. O. Shepard.**

Arrow Rock, Mo., June 2, 1883.

I am very much pleased with the sun-glass. When the sun shines I do not need a match to light my old pipe. **John W. Corbett.**

Bennettsville, S. C., March 25, 1883.

[Well, now, friend C., it seems to me that is rather "cool." Do you suppose I am building up a trade on sun-glasses, just to help tobacco-users light their pipes a little handier?]

QUEER "FIGGERS."

What kind of arithmetic do you use down there? I sent 13 cts. for 1 oz. of Russian-sunflower seed, and one pair of five-cent scissors, leaving 3 cts. for postage. I received the scissors and *two ounces* of seed, requiring 4 cts. postage—19 cents for 13. If you keep on dealing that way, somebody will get rich. It is worth more than 5 cts. to see our two-year-old Blue Eyes with her scissors.

Howard Center, Ia. **Burdette Hasset.**

Please mail to my address as below, a copy of your A B C of Bee Culture, cloth. I bought a copy two years ago, paper back, and loaned it so much that it is now well worn, so I want a copy for myself, and the one I now have for those unable to buy one. The bee-keepers of this section are waking up, and are adopting the Simplicity. I have made and sold, since last spring, about 150 to 200 Simplicity hives; orders still coming in. I am the only one in this county who has genuine Italian queens.

Pocomoke City, Md. **R. M. Stevenson.**

A PLEASED A B C SCHOLAR.

I received the smoker and fdn. to-day in good condition. I am greatly pleased with them. There were 25 persons at the postoffice when they arrived, mostly old men; some of them had never seen nor heard tell of such things. Most of them knew I had the "bee-fever," as they call it; but just imagine how the old gray-headed fellows were amazed when I undid the goods, and explained to them what they were for, and what I could do with them. I am starting up a good deal of excitement on the bee business in this backwoods part of Kentucky, as they know that it is only 12 months since I bought and commenced handling my first colony of bees, and now I have 3 good hives, and looking every day for more to issue from them.

HENRY W. CARMAN.

Custer, Breck. Co., Ky., May 25, 1883.

The ten-inch $25.00 fdn. mill and other goods shipped to me April 13 came to hand on the 26th. The freight was one dollar and one cent — much less than I had expected. We were soon making full sheets of fdn., but began on narrow strips. The wax would stick some at first in the mill, but that was owing to cool weather, as some sheets broke like glass. It was the first roll mill I ever saw; and considering our inexperience, we think we did well. Every thing gave satisfaction, from the Novice honey-knife to the Clark smoker. We have had people guess the price of the 35-cent clothes-line. Some have guessed as high as one dollar.

Fayette, Ia., May 8, 1883. FRED TIMMERMAN.

Please accept thanks for your Home talk in the March No. It has done me good, and helped me to preach for the Master, and I feel that it was a voice from him, to encourage me in the hour of trial and temptation. It has done me good when my brethren have told me that my talks have done them good; so please accept this brief note, hoping it may do you good also. We are having a very gracious work, and one of the most honored instruments in the hands of God is a saloon-keeper, who has been the means of turning many from the power of Satan to God. Bro. Root, pardon me, a stranger to you; yet I seem to *know* you well through GLEANINGS. Bees are in good shape; loss less than 2 per cent.

E. T. FOGLE.

Hartsville, Barthol. Co., Ind., Apr. 7, 1883.

[May God bless you for your kind words, my dear friend, and for the cheering news you give us of the work in your vicinity.]

Inclosed find 28 cts., for which please send me the Christian's Secret of a Happy Life. I thought perhaps I might find something in it that I ought to know or do. I am not a Christian, Mr. Root, but I wish I were. I am one of those awkward, bashful men, who say just what they ought not to. I have often felt that I ought to get up in meeting and ask the prayers of Christian people, but it would come in my mind that I would make a fool of myself; better sit still; so that is the way it went. I am now 35 years old; have three very nice little children — two little girls; one two, the other four, and a baby boy. I want them to grow up to be Christians. Will you pray for me, Mr. Root? The Bible says the prayers of the righteous avail much, and I have often thought if I could have a good talk with you, and tell you how I felt, it would do me good. I used to be a reader of GLEANINGS, and enjoyed it much; but since I came to Missouri I have been too poor. I hope to be able to spare a dollar next year. I came from Illinois two years ago for the health of our little girl, five years old then. She had consumption; and one morning, shortly after we got here, she began bleeding at the lungs, and the blood gushed from her nose and mouth; she could not catch her breath, and she died in my arms. It was such a trial to give her up! She was my pet, and thought much of me; and my good dear mother has been laid in her grave since I left home. Oh, Mr. Root! pray for me, that I may meet them in heaven. J. T. SHUMARD.

Panacea, Mo., May 8, 1883.

[May God bless you, and help you to be a brave soldier of the cross, my good friend. To be sure, I will pray for you; and you, on your part, must not be afraid. Push boldly forward, and never fear. If it is his will that you should make a fool of yourself, *be one* for his sake. Try to let the memory of those loved ones only draw you nearer toward God who has taken them.]

A "GREAT BIG" "KIND WORDS."

The first copy of GLEANINGS came to hand in due time. I am very much pleased indeed with it. Your instructions on "How to make a cut-off saw-table" were just what I stood in need of, and I consider that article alone worth the price of your yearly subscription, besides the other interesting and instructive matter contained therein. In fact, I can hardly see how I or any one else could have got along a year without it. I could not have done so, I am sure, had it not been for the A B C. With it I came through my first-year's work in good shape. I will tell you how I managed, and what the results were. I purchased 54 colonies from Mr. Christie last May. They had been in other hands, and were consequently in a very weak and destitute condition — ten or twelve entirely queenless. The forest and fruit bloom was gone, and a cold wet June followed. Many of my friends and neighbors offered sympathy for my bad prospects, and, indeed, it did look repulsive for a greeney; but I continued to work; and with the aid of your A B C, and a good barrel of sorghum sugar, of my own manufacture, I carried them through until the basswood bloom came on; and after that I had easy sailing, and came out in November a good way "ahead of the hounds;" viz., 88 colonies, and close on to *eight thousand pounds of honey*, and plenty of stores to winter on. I put them in a well-ventilated cellar for winter quarters in November; in March I took them out, minus two; one had smothered. For some cause the entrance had become choked; the other swarm was queenless, and of course I could not expect them to come though.

I am now feeding and building up 100 colonies for basswood bloom; and although some think it extravagant, and money lost, to feed bees in June, yet I expect to get it all back, with a good heavy per cent; for I marketed last year's crop at 14 cts. net, and have a great many good customers, some already waiting for honey.

SORGHUM FOR SPRING FEEDING, AND HOW TO USE IT.

Perhaps some one may desire to know how I feed the sorghum. I dissolve it in warm water to a thin liquid, so it will run out easily through a tin teapot; fill combs, and insert one right in the center of the brood-nest. Almost invariably I would find on the third day the syrup all removed, and the comb filled with eggs, when I would again repeat the operation, just shoving the others one side, remove an empty comb, and insert another filled with syrup, and so on; thus in a few weeks they were strong, and in good shape for work. S. W. BIRD.

Maple Landing, Ia., June 2, 1883.

I have been profited and helped more than I can express by the practical talks of the "Home" department. I have made them do more work than in my own home. I have sent them to those whom I specially thought might be helped; sometimes to the prison, sometimes to our county jail, or to some home where such a practical talk might do good. I believe God has blessed them, and is blessing you in giving you the means to reach so many. I do not know much about bees. I am like your juvenile correspondents who "like honey but are afraid of bees."

A NEW FACT (?) ABOUT BEES.

I have two neighbors; one old gentleman and the other an old lady. The old lady made complaint to the old gentleman that his bees injured her grapes. "Oh, no!" he said. "It is not my bees; for my bees always fly west." As the old lady lived to the east of him, his apology for his bees was conclusive. This is a point I have never seen argued, that one's bees always follow a certain direction, and yet may be it is so. You who know every thing about bees will certainly know. If I were younger, I think I should catch the enthusiasm from reading the journal; but I thank you for your kindness in giving me the pleasure of knowing of the success and enthusiasm of so many.

SOMETHING ABOUT THE INMATES OF OUR PRISONS.

I am still interested as much, and more than ever, in the prisons. I visited the Ohio Penitentiary this winter, and had the privilege of speaking to the men in their Sunday-morning prayer-meeting, and in their regular morning service. It was a wonderful sight to stand and look into the eyes of such an audience, nearly 1300 men, all in prison garb. I have been glad to see that the member from your County, Hon. A. D. Licey, has the cause of the prisoners at heart. I took great interest in the bill for abolishing contract labor, and was so sorry that it failed. I believe that the contract-labor system has much to do with the insubordination of the prisons, of which we have heard so much the past year. The most humane manner of managing prisoners ought to be studied. And I know that there are those who will not let the matter rest until such abuses as grow out of contract labor are abolished. With many wishes for your success in benefiting so large a number, spiritually as well as in every other way, and in earnest purpose to follow the great Leader, I am yours in Christian fellowship, MRS. E. H. FARR.

Norwalk, O., May 22, 1883.

Juvenile Gleanings.

JUNE 15, 1883.

Contents of this Number.

Bees, Hiving 348
Cat and Horse Story 349
Caution about Hot Wax ...352
Chicken Cholera 348
Combs, Empty...................358
Fuel for Smokers 348
Glatfelter's Feeder...........355
Gourd Hives.. 347
Honey, Removing..... 349
Honey, Candied. 352
Honey-Locust....................347
Kind Words......................356
Locust-trees......................347
Myself and Neighbors 343
Nettie's Letter..................346
Orders, Filling...................358
Prisoners 357
Rocky-Mountain Plant.......352
Sub-ventilation.... 352
Swarm in Rain 349
Swarming-boxes ... .353
Transferring 356
Victoria's Bees..................356
Virgil .... .345

WAX has dropped, and we have such a stock on hand that we can pay only 30c cash, or 32 c trade, for all shipped us after this date.

W. A. SANDERS, Oak Bower, Hart Co., Ga., has 15 black queens, that he will send to anybody who wants them, for 31 cents each.

OUR friend George, the label and job printer, wishes me to say that a nice little book of samples of labels, with prices of all kinds of job printing, is now ready to mail. Mailed free to anybody who wants it.

TO-DAY is the 14th, and as the fearful blockade we have had in the office is hardly yet straightened out, the book-keeper suggests that, if you give the number of your ledger page when writing, it will often enable us to answer you one mail sooner.

ORDERS for fdn. mills are all filled; and by the time this reaches you, we shall be prepared to ship 10-inch mills by next train. In fact, we have quite a number almost done, and we shall now keep them boxed up ahead, ready to ship. Other sizes can be put up on very short notice.

As it is much more important to get goods off for waiting customers than to look up complaints and misunderstandings, I hope those who don't hear from us in regard to the latter will bear our silence patiently. Come right to the point, and say what it is you want, and we will send it, and accounts can be straightened up after the rush. If you get your goods twice, dispose of for us what you don't need, if you can; and if not, we will direct in regard to their return or disposal.

Do not, I pray you, friends, be in haste to write back that some of your goods have been omitted. Open every package, no matter if you do think it can't be there. Over and over again, some one of you says a part of your goods was left out, and our overworked, tired, worn-out clerks take a laborious hunt over books and letters, and then go home with sad hearts and weary bodies, and the next day comes a postal card, very quietly saying it was a mistake; he "hadn't opened all the boxes," or "didn't think of their being in the center of a crate of hives," etc.

EMPTY COMBS.

A GREAT many are still asking what to do with the empty combs from hives where the bees have died. Put more bees on them, friends. If you are going to work for extracted honey, give each colony 30 or 40 of them, and they will store an immense crop of honey in a hive four stories high. If you want to divide them at any time, take off one, two, or three of these upper stories, and give a queen to each, and they are a nice swarm almost at once. Don't let the worms get at them, even if you have to brimstone them, according to directions in the A B C.

WE have now all kinds of queens on hand, ready to ship by return mail, except blacks and hybrids. When ordering either of these, be sure to tell us what to do, in case we have none on hand. I was somewhat surprised, after our last journal went out, to receive so many orders just as soon as we made it known we had 30 or 40 black queens on hand. Two or three telegrams came for them the minute the journal was received, and orders have been coming daily almost ever since. Would it not be well for those having blacks and hybrids for sale to let it be known?

ONE of the juveniles (page 356) inquires about the distance our 75-cent telephones will work. He will see by our price list that we furnish with them 200 feet of wire, and one-eighth of a mile is about as far as they work real satisfactorily; still, with all the conditions just right, they answer very well for a quarter of a mile, and even perhaps half a mile. When the distance is so long, the rooms where they are located must be perfectly still and quiet, and the wire must be drawn very tight.

FILLING ORDERS.

WE are still considerably behind on orders by freight; and, a few days back, on some of the orders by express; and the mailing clerks have a rather larger heap of letters before them than is usually the case. But as orders are slacking quite perceptibly, we shall not be obliged to delay anybody much longer. I know quite a number of the friends have felt hard about the delays on freight shipments, and that many think we have no business having more "business" than we can attend to in a *business*-like way; but I think that, if you inquire, you will find such a state of affairs is not very unusual in the growth of any business. More help we have had as fast as it could be used, and more machinery has been purchased, until there is really not standing-room for it; and to remedy this last trouble we started the new factory, even when it seemed almost unwise to do so. This new factory is now up to the first floor, and the expanse of sleepers that the floor is soon to be laid on looks almost as if it were more fitting for a pasture lot than for a building; yet I dare say we shall fill it completely, almost as soon as it is ready. I know my reputation has suffered, and I am sorry for it; for I know very well the best advertisement in the world is *good goods* by the very first train after the order is received. I enjoy "hugely," sending folks goods before they expect them, and I feel dismal when I have to make anybody wait. We are planning hard on facilities for giving you almost any thing in our price list the minute your order is handed us from the postoffice, and I have little fear but that we shall find enough to do, when we truly deserve it. The girls are already feeling happy at the prospect of an office carpeted, with hard-wood finish, inside blinds, and a little outside of the roar of the machinery that is now right under us. You will come and see us then, will you not?

WHAT TO DO WHEN GOODS ARE NOT AS YOU ORDERED OR EXPECTED.

As most of my life has been spent in buying as well as selling goods, and as I believe I am generally considered a desirable customer, I think perhaps a few words from me here may be helpful. When you order, make your order plain; and when you order from a catalogue, copy the name of the article from the catalogue, in the *very words* used by the catalogue, and give price. Be especially careful to give the price, as the price often gives the clew to what is wanted, when the writing is so bad or so brief that it could not be guessed at otherwise. If you use the same terms the maker of the goods uses, any mistake made must surely be his fault. Well, after you get your goods, if they are not satisfactory, write at once to the shipper, and tell plainly what the trouble is, also stating just how much rebate you think you ought to have, to make it all fair. If he is a fair man, and you yourself are a fair man, the matter can usually be closed up at once; whereas, if you make a long story of it, without stating definitely what is wanted, he may conclude your custom is more bother than profit, and pay no attention to it. Large business houses, as a rule, do not often write long letters. Many times, when time is valuable, it is cheaper to hand over 25 or 50 cents, or even a dollar, than to go through with a long list of particulars. May I say, in closing, that it always pays best in the end to help the man you buy of, out of any mistake or misfortune, the best you can? I have a great many times kept goods sent me by mistake, rather than put to trouble and expense the one who sent them, and I have never found a case where a man forgot such a kindness. Sooner or later I had my reward. The man you trade with is your neighbor, and you are ever bound to love him, and to look out for his interests, as well as your own. It may gratify your feelings a little to talk back harshly to him, when he has made a blunder, and to put him to needless expense, when you are provoked; but it never brings lasting happiness, nor puts money in your pocket.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany 387
Bee Entomology .... —
Blasted Hopes 397
Editorials 402
Forgettery .... —
Heads of Grain 388
Honey Column 364
Humbugs and Swindles .... —
Ladies' Department 395
Notes and Queries 398
Obituary .... —
Remindery 375
Reports Encouraging 397
Smilery .... —
The Growlery .... —
Tobacco Column 402

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Alley's Plan for Queens 394
Arkansas Notes 384
Aspen for Sections 390
Banner Apiary 365
Baskets, Hiving 392
Basswoods from Seeds 398
Bees Enough 388
Bees Remem. Location 369
Bees will Sting 386
Bees and Humanity 405
Bees in Honey-house 378, 382
Bees, Lunatic 372
Bees, Salting 390
Bees, Tramp 395
Bees, How Far and Fast. 369, 376, 391, 394
Bees, Syrian 392
Bees, Watering in Winter. 394
Bees, Water for 382
Blanton's Letter 372, 397
Brood-rearing, Late 390
Buckbush 388
Buzz-saws 389
California 397
Candy, To Soften 389
Chickens in Bee-yard 380, 392
Chaff Hives in Cold Spring. 375
Cheirograph 394
Clover, Sweet 388
Comb, Drone or Worker? 374
Disease, A New 398
Division-board, Patent 371
Doolittle 376
Draft in a Hive 382
Dysentery 388
Fdn., Thin 389
Fdn. Press 379
Flight, Cleansing 395
Florida 377, 391, 393
Flying in Winter 390
Friend, From a 393
Good's New Home 384
Harrison, Mrs 369
Hasty 370
Heddon 373
Heart's-ease 386
Hives, Tenement 382
Hive, The Fife 398
Honey, To Market Extr'd 381
Honey, Apple-blossom 389
Honey and Snowstorms 395
Hyb's from Black Qu., etc 380
Hyb's, Good Word for 392
Italians, Purity of 374
Journal, A New 370
Kentucky 394
Labels on Tin 383
Langstroth 366
Lilac 398
Locust, Black 385
Lupine 387
Milkweed 387
Missouri, S. W. 388
Muth's Platform 392
New Hamp. and Florida 381
Orange-groves 391
Our Clearing 378
Overstocking 369, 373
Porous Covering 382
Primroses 387
Qu., How did they Get One? 393
Queens, Non-laying 393, 398
Queens, Two in a Hive 395
Queen-cell 9 Days Hatching. 394
Railroad Officials 371
Robbins' First Year 385
Saws 405
Saws, Hand-power 385
Saw-palmetto 397
Sheets, Enameled 382
Smartweed 386
Smoke for Swarms 389
Spring Troubles 379
Statistics 389
Straining Ext. Honey 378
Sugar for Winter 394
Swarming without Clustering 369, 371, 383, 390, 392
Swarms, Strengtening 383
Swarming in May 391
Swarming, To Prevent 379
Swarms, New, Going off 380
Swarms, New 386
Swarming without Queen 394
Texas 397
Transferring, by J. R 385
Tree-planting 388
Tribulations 396
Vanilla 377
Ventilation, Sub-earth 380, 384
Vinegar, Honey 384
Wax and Rosin, etc. 393
Wheelbarrows 406
Wings, Clipping 383
Wint. in Simp. Hives 391
Wires, Pressing into Fdn 392

WE ARE AFTER YOU!

Hybrid queen, and all the bees in a colony, not less than three pounds, for $3.00, after the 10th of July.

M. L. WILLIAMS,
VANCEBURG, - - LEWIS CO., KY.

FIELD PEAS THAT BEAR HONEY!

OUR readers have doubtless noticed the many reports we have had of honey from peas during the past year or two. We have just received a large lot of them for seed, from friend Burrows, of Lynnville, Tenn., who writes in regard to them as follows: "These stock peas, so celebrated for honey, should be planted in June, and will make a continuous flow of honey from August to frost, and a heavy crop of peas." Price $1.75 per bushel; $1.00 for half a bushel; 60 cts. per peck, packages included. By mail, postpaid, 20 cts. per pint. If sown in July, they will give a crop of honey, but may not mature the peas.

A. I. ROOT, Medina, O.

FULL COLONIES
Italian Bees with Queen
In Root's Simplicity Hive, $7.00.
E. D. GILLETT, BRIGHTON, LORAIN CO., OHIO,
5-6d

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 7tf
*Paul L. Viallon, Bayou Goula, La. 7tfd
*S. F. Newman, Norwalk, Huron Co., O. 7tfd
*Wm. Ballantine, Sago, Musk. Co., O. 7tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2
*J. P. Sterrit, Sheakleyville, Mercer Co., Pa. 2-7
*Chas. R. Mitchell, Hawkinsville, Pulaski Co., Ga. 7tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
*Dr. A. B. Mason, Wagon Works, Lucas Co., O. 2-8
*Jas. O. Facey, New Hamburg, Ont., Can. 7tfd
F. J. Wardell, Urichsville, Tusc. Co., O. 3-9
*S. C. Perry, Portland, Ionia Co., Mich. 7tfd
*J. H. Reed, Orleans, Orange Co., Ind. 7tfd
M. Isbell, Norwich, Chen. Co., N. Y. 4-9
*C. C. Vaughn, Columbia, Maury Co., Tenn. 4-8
*J. W. Keeran, Bloomington, McLean Co., Ill. 4-9
*Oliver Hoover, Clyde, Sandusky Co., O, 5-10
*Ila Michener, Low Banks, Ont., Can. 5-10
*D. G. Edmiston, Adrian, Len. Co., Mich. 5tfd
*D. M. Weybright, New Paris, Elk. Co., Ind. 6-7
*F. G. Cartland, High Point, Guilford Co., N. C. 7tfd
*Jas. A. Nelson, L. box 83, Wyandott, Wy. Co., Kan. 6-5
*S. P. Roddy, Mechanicstown, Fred. Co., Md. 7-8

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 7tfd
L. E. Mercer, Lenox, Taylor Co., Iowa. 4-3

SEND FOR PRICE LIST OF
Langstroth, Simplicity, & Chaff Hives & Supplies.
S. D. BUELL, UNION CITY, BRANCH CO., MICH. 4tfd

COOK'S BRUSH
FOR GETTING BEES OFF THE COMBS.

Sample brush, 18c.; ½ dozen, 90c.; 1 dozen, $1.65. See advertisement in June GLEANINGS, page 338. You will throw away the asparagus-tops, etc., when you use one of our manufactured brushes a day or two. T. J. COOK, NEWPOINT, DECATUR CO., IND.

BURNT OUT!

Having lost our machinery by fire, we can furnish no more SUPPLIES until further notice. We have a large stock of Italian and Holy-Land Bees, and can ship Queens and Bees as usual. Circulars on application to W. B. COGGESHALL, SUP'T.,
Hill Side Apiary, Summit, N. J.
N. S. COGGESHALL, PROP'R, 5-7

AT KANSAS CITY, MO.,

I BREED PURE ITALIAN BEES FOR SALE.

Dollar Queens, after June........................ 1 00
Tested queens double the above price.
Bees per ½ lb., same price as dollar queens.

I *warrant* my *dollar queens* to be purely mated. I do not know that I have a single dissatisfied customer; but if there are any such, and they will write me in regard to the matter, I will do the best that I can to render satisfaction.

3tfd **E. M. HAYHURST, P. O. Box, 1131.**

VANDERVORT COMB FOUNDATION,

ITALIAN, CYPRIAN, and HOLY-LAND QUEENS.

I. L. SCOFIELD, 3-8d
CHENANGO BRIDGE, - BROOME CO., - N. Y.

SAVE MONEY!

Nuclei, 3-frame and tested queen	$3 50
Nuclei, 3-frame, untested "	3 00
Nuclei, 4-frame and tested "	4 50
Nuclei, 4-frame, untested "	4 00
Tested queens, after May 15	2 00
Untested queens, after May 15	1 00
Full colonies in Simplicity hives,	8 00

Will ship full colonies in April. I will guarantee every thing I send out to be first-class.

3tfd DAN WHITE, New London, Huron Co., O.

PURE ITALIAN QUEENS,

Carefully bred from imported and home-bred mothers. Sent by mail. Safe arrival guaranteed. No black bees near.

1 untested queen before July 1, $1.25; after, $1.00
6 " " " " 1, 6.50; " 5.50
Tested queens, nuclei, and full colonies.

PLYMOUTH-ROCK FOWLS.—Eggs from this justly celebrated breed of fowls, $1.25 per setting of 13. Send for circular free. J. H. REED, Orleans, Orange Co., Ind. 3tfd

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MUTH'S
HONEY EXTRACTOR,

SQUARE GLASS HONEY JARS,
TIN BUCKETS, BEE HIVES,
HONEY SECTIONS, &c., &c.

Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers." 1tfd

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THE VERY BEST

Italian and Holy-Land Queens; also Apiarian Supplies at prices to suit the times. Circular free.
GEO. H. KNICKERBOCKER, PINE PLAINS, N.Y.
5-8d

FLAT-BOTTOM COMB FOUNDATION.—High side-walls, 4 to 14 square feet to the lb. Circular and samples free. J. VAN DEUSEN & SONS,
Sole Manufacturers,
4tfd Sprout Brook, Mont. Co., N. Y.

HEADQUARTERS FOR TIN POINTS.

Price, 20 cts. for 1000, by express; by mail, 30 cts.
5tfd W. C. GILLETTE, Le Roy, Genesee Co., N. Y.

VON DORN'S FOUNDATION

GIVES SATISFACTION.

Recommendation: 300 per cent increase in sales in 1882. BEESWAX WANTED. Send for circular.
3tfd M. C. VON DORN, 820 S. AVE., OMAHA, NEB.

DADANT'S FOUNDATION.

—UNSOLICITED TESTIMONIALS.—

Nothing is better; your fdn. suits exactly.
Cincinnati, O., Oct. 23, 1882. CHAS. F. MUTH.
The finest and brightest I ever saw.
Adamsville, O., March, 1882. GREEN R. SHIRER.
Best I have used; no breaking down; bees take it readily. W. B. SPENCE, Sidney, Ohio, Aug. 31, 1882.
I like it better than any offered by dealers.
Baltimore, Md., Jan. 24, 1882. C. H. LAKE.
It is the nicest I have used. D. KEYES.
Louisville, Ky., June 20, 1882.
It is the best I ever saw. GEO. WUSTUM.
Racine, Wis., July 19, 1882.
Willing to pay 2 cts. per lb. more than for any I have seen. F. WILCOX, Mauston, Wis., Mar. 23, 1882.
The most perfect article that I have seen.
Christianburg, Ky. G. W. DEMAREE.
Very well satisfied. Bees worked on it finely.
Avon, St. Genevieve Co., Mo. WM. BLOOM.
Have used about 75 lbs. from ——, but I prefer yours. REV. W. BALLANTINE, Sago, Ohio.
Your foundation is the best. J. W. PORTER.
Charlottesville, Va., March 25, 1882.
The nicest I ever received. H. W. FUNK.
Bloomington, Ill.
Your fdn. beats them all. Bees draw it out faster. JOS. CROWDEN, Remington, Ind.
Ahead of any fdn. maker of the world.
Borodino, N. Y. G. M. DOOLITTLE.
I concluded to send to you, even if express is higher. Council Grove, Kan. D. T. NORTON.
I never saw any nicer. G. TISDALE.
Westfield, N. Y., March 31, 1882.
Better than any I have ever had. J. B. MASON.
Mechanic's Falls, Me.
Well pleased with the foundation.
Council Bend, Ark. GEO. B. PETERS.

We are working on a new set of machinery made expressly for us. But, friends, remember that, to fill all the orders, we need wax; and if you have some, please write us. We will pay a high price for it. Send for our retail or wholesale circular, with samples free. We sell also colonies, queens, and supplies. **CHAS. DADANT & SON,**
2tfd HAMILTON, HANCOCK CO., ILL.

COMB FOUNDATION.

Italian Bees by the pound, nucleus, or colony. Queens furnished when desired. Five per cent discount on A. I. Root's prices. For particulars, address
4-7 E. Y. PERKINS, Jefferson, Greene Co., Iowa.

GEORGE W. BAKER,

—OF—

Lewisville, Henry Co., Ind.

Has 3000 New Illustrated Circulars (to give away) of

ITALIAN BEES, QUEENS,

Plymouth Rock & Brown Leghorn Fowls.
EGGS FOR HATCHING.

Also Extractors, Honey-Knives, Smokers, etc., etc. 3-2d

HEADQUARTERS FOR
Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular, containing directions for introducing queens, remarks on the new races of Bees, &c. Address
1tfd DR. J. P. H. BROWN, Augusta, Ga.

E. T. LEWIS & CO., TOLEDO, OHIO, Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

L. E. MERCER,
—OF—
LENOX, IOWA,

Breeds Pure Italian Bees and Queens for sale; Manufactures the Root Chaff Hive, the Standard Langstroth Hive, and the Mercer Chaff Hive. Sections, dovetailed or all-in-one-piece. I furnish every thing needed to run a first-class apiary. Satisfaction guaranteed, or money refunded. Circular and price list free. 6-7d

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THE
British Bee Journal.

The British Bee Journal is now mailed to our address in packages, semi-monthly. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan., 1883. Will guarantee safe arrival of every number.
A. I. ROOT, Medina, Ohio.

JUST OUT!

New Circular, and price list of Bees, Queens, and STENCILS for bee-keepers' use. 4-9d
JOS. M. BROOKS, COLUMBUS, BARTHOLOMEW CO., INDIANA.

Bingham Smokers

PER MAIL, POSTPAID.

The Doctor Smoker,	3½x14-in.	stove, wide shield	$2 00
Conqueror "	3x14- "	" " "	1 75
Large "	2½x12- "	" " "	1 50
Extra "	2x12- "	" " "	1 25
Plain "	2x12,	narrow shield......	1 00
Little Wonder "	1¾x10,	" "	65
Bingham & Hetherington's Uncapping-Knife.			1 15

Our smokers all burn sound wood, and do not go out. Sent by mail on receipt of price.
Address BINGHAM & HETHERINGTON,
6tfd ABRONIA, MICH.

1883 THIRTEENTH YEAR. 1883
Italian & Syrian Queens.

Tested queens, in April and May,	$2 50
Tested queens, in June and after,	2 00
Untested queens, in April and May,	1 25
Untested queens, in June and after,	1 00

Sent by mail, and safe arrival guaranteed. Send for circular.
Address **W. P. HENDERSON,**
2-7dinq MURFREESBORO, RUTH. CO., TENN.

WARRANTED ITALIAN QUEENS, from hardy improved stock, $1.00 each; from imported mothers, 50 cts. extra. Satisfaction guaranteed. None of the new races kept in this vicinity.
2-7 W. H. PROCTOR & Co., Fairhaven, Vermont.

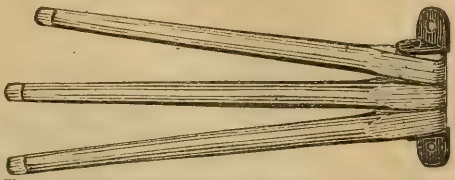
The Excelsior Poultry Yards

are always well stocked with Pure-Bred Poultry and Italian Bees; Extractors, Foundation, Hives, etc., for sale. Job Printing of every description done cheap for cash. Circulars free.
Address J. T. FLETCHER, West Monterey,
12-9d Clarion Co., Pa.

BEE-KEEPERS' SUPPLIES.

It will pay to get our prices before purchasing your supplies. Good Langstroth Hives, with 8-inch cap, frames, quilt, etc., in the flat, 60 cents each. Manufactured from good pine lumber. Workmanship unexcelled. Crates and Sections cheap, and Dunham foundation a specialty. WM. O. BURK,
Successor to Hiram Roop. CRYSTAL, Mont. Co., Mich.
5-7d

Clothes-Bars, or Towel-Rack.



The above is made of strips of basswood that come from our section machinery, and this is why we can furnish them at such a low figure. The ends of the bars are tipped with a neat nickel-plated ferule; and when screwed up against the wall it is a strong and neat piece of furniture. Price 15 cents; 10 for $1.25, or 100 for $11.00. By mail, 10 cts. each extra.
A. I. ROOT, Medina, O.

ATTENTION!

FULL COLONIES OF BEES, NUCLEI, QUEENS, FOUNDATION, SECTIONS, SMOKERS, HIVES, AND ALL APIARIAN IMPLEMENTS CONSTANTLY ON HAND. FULL COLONIES AND NUCLEI A **SPECIALTY**. SEND FOR CIRCULAR AND PRICE LIST TO

FLANAGAN & ILLINSKI,
BOX 819. BELLEVILLE, ST. CLAIR CO., ILL.
6-12d

MORE ABOUT SHORTHAND.
Easily learned and successfully taught, personally or by mail. Valuable and interesting circulars free.
CHAS. R. MITCHELL,
7d Lock Box 32. Hawkinsville, Ga.

HOLY-LAND
AND
CYPRIAN QUEENS
AND
Farm Implements!

I have a fine lot of pure Holy-Land and Cyprian queens which I will sell for one-fourth more than Root sells his Italians. Also a few pure Albinos; they are light-colored, and very gentle.

I keep on hand, and can ship from the factories where made, a stock of Farm Implements, a two-horse corn-planter, with drill attachment; one-horse corn-drills that will plant in hills; a steel-toothed harrow in three sections, with lever to clear from trash, or pass over obstacles; spring-tooth harrows; common harrows, with 40 or 50 teeth; sulkey hay-rakes; sulkey cultivators, plow-sulkeys, etc. Send for Circular. tf
H. B. HARRINGTON, Medina, O.

FOUND AT LAST!

New cage and new candy; no honey in it; have not lost a single queen in the mails this season. Can furnish queens by return mail now. Send for circular
Address **T. S. HALL,**
7d Kirby's Creek, Jackson Co., Ala.

BEE KEEPERS' GUIDE
28 Pages, 50c. per year.
SPECIMEN COPY FREE.
5-7d **A. G. HILL, Kendallville, Ind.**

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

---

SEND postal for my 20-page price list of Italian, Cyprian, and Holy-Land Bees, Nuclei, Queens, and Apiarian Supplies.
4tfd H. H. BROWN, Light Street, Col. Co., Pa.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CHICAGO.—There is not any demand to speak of for comb honey, hence the prices vary. There is a good demand for extracted, and at the present writing there is not a package of white honey in the market. It would bring 10 cts.; dark, 8 c. *Beeswax*, 30 @ 35. R. A. BURNETT.
Chicago, June 23, 1883.

[There, friends, there is a chance for you, if you have got any nice honey that you want to sell at 10 cents. Is it not a little singular that comb honey should be uncalled for, while extracted is in good demand? I can not help saying I think the idea a sensible one, any way. Real nice extracted honey is, to my mind, preferable to comb honey for actual use, every time.]

MILWAUKEE.—The honey market here is very quiet now indeed, and but light demand. What sales occur are in a small way. Choice 1-℔. sections, 17 to 18 cts.; fair 2-℔. do., 16 cts.; common and dark do., 14 to 15 cts.; extracted, in tin cans, 11 to 12 cts. The supply is small, and the season will be later than usual for getting new crop. A. V. BISHOP.
Milwaukee, June 22, 1883.

NEW YORK.—We take pleasure in sending you our present quotations on honey and wax, as follows:

Choice white-clover,	in 1-℔. secs. (no glass)	per ℔.	20@21
" "	" 2 " " (glassed)	" "	18@20
Fair grades "	" 1 and 2 ℔. secs.	" "	16@17
Choice buckwheat,	" 1-℔. secs. (no glass)	" "	15@16
" "	" 2 " " (glassed)	" "	14
Extracted clover,	in kegs and small bbls.	" "	10@11
" buckwheat,	" " " " "	" "	8@8½
Prime yellow beeswax,		" "	36½

H. K. & F. B. THURBER & CO.
New York, June 22, 1883.

CLEVELAND.—*Honey* in 1-lb. sections is in moderate request at 18 to 19 cts. for best white; 2-lbs. continue very dull. Extracted, no sale at all in our market. *Beeswax*, there is none offering, consequently no price. A. C. KENDEL.
Cleveland, June 21, 1883.

CINCINNATI.—Extracted honey has commenced to come in freely, and a large crop is reported from all quarters. The demand is very good, and keeps pace with the arrivals. No change in prices. I have received several nice lots of comb honey, for which we paid 15 @ 16 cents on arrival. Arrivals of *beeswax* were good of late; 32 c. is our price on arrival.
Cincinnati, June 22, 1883. C. F. MUTH.

DETROIT.—*Honey.*—The honey market is almost lifeless; it is quoted at 15@18 cents, but there is scarcely any demand. *Beeswax* is worth 30@35 cents.
Detroit, June 25, 1883. A. B. WEED.

BOSTON.—Comb honey, 20 cts; extracted, 10 cents. Trade is quiet. CROCKER & BLAKE.
Boston, June 22, 1883.

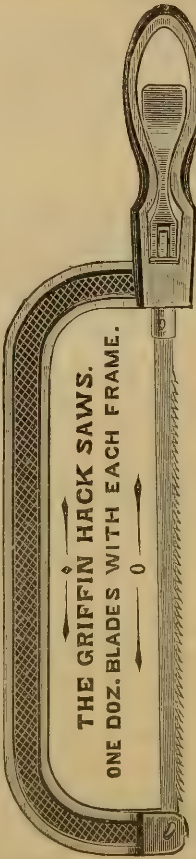
ITALIAN BEES,

$7.00; by pound, $1.00. Queens, $1.00. Also about 200 broad frames with tin separators for sale cheap.
7 E. A. GASTMAN, Decatur, Macon Co., Ill.

NOTICE!

No more full colonies or nuclei, or bees by the pound for sale. I have sold all I can spare.
7d T. S. HALL, Kirby's Creek, Jackson Co., Ala.

AN IMPROVEMENT IN SAWS FOR SAWING METALS, ETC.



Who has not felt the want of something to cut metals rapidly? An ordinary hack-saw will do very well when it has a good sharp whole blade; but when the blade gets broken and dull, how vexatious it is! In the one shown below, which can be used for sawing wood, horn, bone, ivory, or almost any thing as well as its legitimate use of sawing metals, the blade is made so that it can be put in, in a twinkling. The blades are easily detached, being fastened in place by two simple pins; and are strained up for use by means of the lever, and the tension is thus easily maintained. The blades are tempered so hard that they can not be filed, and when dull are to be thrown away and a new one inserted, which is cheaper than a hard saw can be filed. And furthermore, nice new sharp blades cost less than 5 cts. when bought by the quantity. The plan of fastening the blade is very ingenious indeed, and it is all done by simply moving a lever inside the handle. We can furnish these saws, with one dozen blades, for $1.00, all packed in a neat little box. If wanted by mail, add 20 cts. postage. Extra blades are 5 cts. each; 45 cts. for 10, or $4.00 a hundred.

ADDRESS
ALL ORDERS TO
A. I. ROOT,
MEDINA, - OHIO.

BEES by the POUND.

I have no more bees for sale at last month's prices. Prices for July as follows:

Pound of bees,	$1 25
Untested queen,	1 00
Hybrid queen,	50

Ten per cent off in lots of ten or more.
7d J. A. GREEN, DAYTON, LA SALLE CO., ILL.

HOLY-LAND QUEENS.

Dollar queens, single queen, $1.00; six, $5.50; twelve, $10,00. Safe arrival guaranteed.
7-8d JACOB B. GOOD, Nappanee, Elkhart Co., Ind.

LOOK!

A Perfect MORSE Telegraph Instrument for beginners. Send for catalogue.
5-12d P. B. KINGSLEY, Greeneville, Greene Co., Tenn.

CHOICE WARRANTED
ITALIAN QUEENS AT $1.00 EACH.
SATISFACTION GUARANTEED.
CHAS. D. DUVALL, - SPENCERVILLE, - MONT. CO., MD.

1883. ITALIAN QUEENS! 1883.

Untested queens, 85c; two for $1.50; six for $4.25.
Address R. A. BAGSHAW,
7-8d BLUE RIVER, WASHINGTON CO., IND.

GLEANINGS
IN
BEE CULTURE.
DEVOTED·TO·BEES·HONEY·&·HOME·INTERESTS.
F.A.Whiting

Vol. XI. JULY 1, 1883. No. 7.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

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NOTES FROM THE BANNER APIARY.

No. 44.

A VISIT TO "OUR CLEARING," THE HOME OF "CYULA LINSWIK."

IT will be remembered that, in the Feb. GLEANINGS, Cyula Linswik stated their determination to sell, or give away, every one of their 75 colonies; well, it might not have been the reading of my last article, "From 60 to 16," that led Cyula and her sister to think that I would be glad to buy their bees, but, be that as it may, soon after its appearance I received a letter offering me 30 of the colonies upon very liberal terms; and Monday morning, June 11, found me *en route* for the bees. The four hours that I had to wait in East Saginaw for a train, were very pleasantly and profitably spent in visiting Dr. L. C. Whiting and J. H. Wellington and O. J. Hetherington. Dr. Whiting has about 30 colonies in the little yard back of his house.

IMPORTANCE OF SPRING PACKING.

Dr. W. showed me one colony, the frames of which had been covered two weeks with wire cloth, the purchaser not having come for the bees when expected, and there was a loss of at least two combs of brood. Although it is getting a little ahead of my story, I think I will say right here that the bees at "Our Clearing" were snugly packed all the spring with quilts and cushions, many of which had not been removed when I was there, and the hives were overflowing with bees. Taken upon an average, the colonies were stronger than those bought of friend Robertson, and that is saying considerable.

At Messrs. Wellington and Hetherington's, I saw several labor-saving machines and contrivances for nailing frames, putting together sections, putting in fdn., and so on. These gentlemen are the ones who use the frames that can be turned upside down. If I remember rightly, they have about 175 colonies, all of which, except two, are located about 4 miles out in the country.

After several hours of "railroading," unbroken by any incident except that the engineer once brought the train suddenly to a standstill just as the engine was running upon a heavy logging chain that somebody had carelessly left lying across the track, and less than an hour of buggy-riding,

OUR CLEARING

was reached, just as the shades of night were falling. An inviting supper was soon ready. This dispatched, we adjourned to the sitting-room, and talked bees. Miss Cyula cornered me down pretty closely on my sugar-feeding hobby; she wanted to know if this feeding had not induced breeding, and that *that might* have had its influence. As the feeding was all done in 3 days, it was my *opinion* that such was not the case, but I could not "get out of it" until I promised to *feed extracted honey* to some of my colonies another fall.

Early the next morning the work of selecting the colonies, and preparing them for shipment, was begun. We had not much more than commenced before it began to rain, and we were obliged to carry the colonies into the old house to pack them. Yes, since the new house on the hill nearer the road was finished, that old, romantic, vine-covered log-house has been used for a shop and store room; its pantry, bedrooms, and cubby-holes reminding me very much of my own shop. Nearly all of the bees were pure Italian; and gentler, better-behaved bees it has seldom been my lot to handle. But then, I don't wonder they are amiable, as they are handled more gently than many women handle their babies.

NAMING QUEENS.

When these ladies bought their first colony they very appropriately and romantically named the queen Eve, and they have continued this pretty habit ever since. Of course, I *smiled* when they first told me this; and when I saw that the smiles did not offend them, I laughed; and as name after name was given, the cuteness of some of them was such that I had to sit down and laugh out loud. When I tell you that a peep into their bookcase showed rows of bound volumes of the *Atlantic Monthly*, a copy of Shakespeare, standard volumes of poetry, etc., and that upon their table were copies of the *Century*, Harper's, *American Agriculturist*, *N. Y. Tribune*, GLEANINGS, and *A. B. J.*, you can easily imagine that the queens were well named. To myself was accorded the honor of naming a young laying queen; and, as they already had a "Nora" and a 'Cora," I named her "Ivy," after our baby. Had I not been so hurried to get the bees ready, and get them to the train, I should have taken pains to mark the name of each queen upon her hive, given the list of names here, and then customers could have ordered queens by *name*. Well, joking aside, there are some advantages in naming queens; as, if a queen is named, she possesses more of an individuality; and, if she or her bees show any peculiarities, they are more easily remembered, and reference is very easily made to any particular swarm, by simply naming the queen.

When I gazed at the magnificent sugar-maples that skirted "Our Clearing" just back of the apiary, I did not wonder that there was some disappointment because they did not blossom this year. I also understood why it was so difficult to stay at home and prepare the bees for winter when these same maples sent out their thousands of gaily colored cards of invitation in the autumn.

Please let me say to Mrs. Harrison, that Cyula and her sister *were* liberal with their help; as Cyula said: "If five dollars a week isn't liberal, what is?" Neither was it lack of kindness that deprived them of their help; but circumstances entirely beyond their control. From reading the last JUVENILE, I should judge that you, friend Root, have had a little experience in the same line, and it was not from "using too much economy" either.

Reader, did you ever prepare any bees for shipment? If you haven't, perhaps you have but little idea what a task it is, especially when some of the frames have metal corners, and the hives metal rabbets, and the frames have all to be nailed fast, wire cloth tacked over the hive, then the hive turned upside down, and the bottom-board fastened on with screws. Well, we worked faithfully all day until 9 P. M., and were up at it again the next morning at four o'clock. Eight o'clock A. M. found us saying good-by and 9 o'clock found us and the bees all aboard an express train bound for home.

Whatever may be said for or against bee-keeping for women, one thing is certain: Cyula Linswik and her sister have made a financial success of bee-keeping, and I presume the readers of GLEANINGS will be glad to know that this success is to be continued, as there are between 30 and 40 colonies yet left at "Our Clearing."

By pathetic appeals to express agents, I so managed that the bees were not delayed at transfer points, and had the bees safely deposited in my own apiary by 9 o'clock P. M., the same day that I started with them. Thursday, Friday, and Saturday, were spent in transferring them, and Sunday three of them swarmed, and Monday morning, while I was going to the P. O., one of the newly hived swarms came out and cut sticks for the woods. My brother "went for them" with the fountain pump, and succeeded in driving them back into the yard; then his pail of water gave out; and while he was after another pailful they said "good-by." Had I been on hand to have kept him supplied with water, we probably should have saved them. This is my first loss from absconding. W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., June 22, 1883.

And you did another good thing, friend H., in making that visit to "Our Clearing," even if it was more a business visit than otherwise. Well do I remember the old log-house you describe so vividly, and a very pleasant visit I had, not only in the old log-house, but out among the bees as well. Like yourself, I, too, got well enough acquainted so that we had some very hearty laughs. The different queens had different names then as now, and one was called "Medina," if I am correct. The sisters told me of the new home that was in prospect, and where it was to be built. But I laughingly told them that perhaps they would never see as much real enjoyment in the new as in the old.—Now, friend H., you have let the little folks know the name of that new baby. And that reminds me that I have not said a word as yet about a new baby at our house. He is blue-eyed, of course; and although nearly six weeks old, is as yet without a name.—You talk about the trouble of fixing frames with the metal corners for transportation. Had you provided yours with some of the spacing-boards we describe and illustrate in our price list, you would have found it a very simple matter indeed.—I am very glad to know that the sisters have made the bees a success. And I feel like protesting once more against their giving up the business.—In regard to help: If I am not mistaken, in a little time good help in the shape of boys and girls will be coming and asking for some work to do. We have here now over 140, and new juveniles are coming daily with the old question, "Mr. Root, haven't you something for me to do?" May God's blessing rest over "Our Clearing."

GOOD NEWS FOR BEE-KEEPERS.

A LETTER FROM OUR OLD FRIEND, L. L. LANGSTROTH.

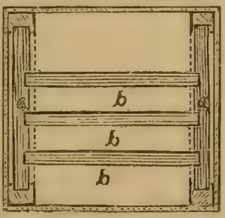
DEAR FRIEND:—After almost two years of suffering from my old head trouble, I am once more so much improved in health that I can take some interest in bee matters. Let me first thank you for the volumes of GLEANINGS which you sent me last winter. I can assure you that I have read them with very much interest.

DRONES FROM WORKER EGGS—NOT A NEW IDEA AFTER ALL.

On page 55 of my work you will see that I noticed in 1852 (as I see from my journal, and not 1854), drones reared under the same circumstances, so frequently referred to by some of your contributors. If the spermatic filaments of the drone remain some time upon the surface of the egg, it is easy to conceive that the bees can remove them before they get into the micropyle of the egg, and hence drones instead of workers.

THE CHAFF - HIVE PROBLEM BROUGHT UP AGAIN.

I wish to make some suggestions for the improvement of your standard chaff hive. You will remember, that years ago you asked for some practical way by which the frames could be inserted in the top story so that it would not be necessary to remove them all in order to get access to those below. I think that this can be done, not only without injury to the main features of your hive, but with an increase of storage room above for frames or sections, besides other advantages. Let me begin by saying that the doubling the case of the upper story is not only unnecessary for the protection of the bees below, but a positive injury to them, in the winter at least, by making that upper story like a damp cellar, and preventing it from drying out as it always does when made of a single thickness. This is one reason why the chaff cushions in your hive are so often damp, when in those I have made they are comparatively dry. Let your top story be made of single thickness, and you not only get rid of this evil, but have much more storage-room, either for frames or sections. Not only so, but you gain just the room which you need for easy instead of cramped access to the lower story. There is good room for your arms, for want of which, even when there are no frames to remove from the upper story, I always dislike to manipulate with your hives, especially if there is much work to be done. Suppose, now, that you have all the room which would be gained by a single thickness of the walls of that story. I will show you how to arrange that space for frames, by a simple plan which I used very successfully more than 15 years ago. My upper stories were made of only ½-inch stuff, and were strengthened by four posts, screwed one into each corner. These posts did not come up level with the sides of the cover, but were kept just enough below to allow frames to rest upon them (*a*, *a*), a little below the frames which sit from front to rear in the upper story (*b*, *b*, *b*). To sustain these frames, thin rails of hard wood, about three inches wide, with upper edges beveled to a sharp edge, were fastened up against the corner posts. The dotted lines represent these rails. You will see that the space in front and rear of the upper frames was utilized for holding storing-frames, which also prevented the bees from building combs between the upper set of frames and the front and rear walls of the upper case of the top story. In the hives I used, in order not to use frames resting on the corners, of a different size from the standard L. frame, the lower story was made to hold 13 frames, in a brood-chamber 18⅛x 18⅛, instead of 18⅛x14⅛; but there will be no need of your chaff hives holding more than ten below.* If you wish to get access to any frame below you need only remove one or two above, moving some of the others nearer together, and there is nothing to prevent you from lifting out the lower frame, the rails on which the upper ones rest being no hindrance at all.



In this way you avoid all the heavy lifting, and other trouble incidental to the plan of the old two-storied hive, when you desire to get access to the lower story. If you still, for any reason, desire to have the upper walls of your chaff hive double, you can avail yourself of this plan, by making the air space very narrow; but in my opinion the hive is much better if single thickness above. There was a time when I would have tried to patent this plan; but while I neither question the absolute right of any inventor to patent any original patentable device, nor the absolute wrong of parties who knowingly infringe upon valid patents, as a matter of plain business common sense I would advise against patenting devices which can so easily be appropriated by others, as almost every thing connected with bee culture must necessarily be.

SOMETHING IN REGARD TO PATENTS.

Where the manufacturing of any patented article requires costly buildings and machinery, and heavy capital, men will think long and often before they attempt to infringe upon it; for in their costly plant they give ample guarantees to those who will defend their rights. On the contrary, if a man could invent the most useful article that human brains ever devised, but which could be easily and cheaply made by almost any one, in order to reap any substatial benefit from his patent he must expect, as the rule, to engage in almost endless litigation, and to spend one fortune in trying to make another. I hope, my dear friend, that you will make at least one chaff hive on the plan I have suggested, and put it to the test of actual use in your apiary.

Last year, in this place, at this time, the weather was most propitious, and the fields and roadsides white with clover; but it had no perceptible fragrance, and the bees in my neighbors' apiaries had to be fed to be kept from starvation! This year, notwithsanding the frequent and drenching rains, our houses are sweet with the smell of clover; and in the intervals when they can work, the bees are accumulating stores at a great rate.

With kind regards to Mrs. Root and family, and to each laborer in your industrious hive, I remain as ever, Yours respectfully,

L. L. LANGSTROTH.

Oxford, Butler Co., O., June, 1883.

Sure enough, friend L., on page 55 of your book we find this very matter recorded, even away back as long ago as 1852, as you say. It seems to me strange that during all the discussion we had in the matter, no one even suggested that you noticed the same thing. Since you speak of it, it seems to me that I must have seen it and afterward forgot it so far that it only seemed to me that some writer had suggested the possibility of drones removing the spermatic filament before it had made its way into the egg.

In regard to your improvement on the chaff hive, after my experiments with the hoop hive, which you may remember, I felt somewhat doubtful in regard to the bees storing honey as well in an upper story made of a single thickness of thin boards. For a powerful colony, your arrangement would give an immense crop of honey. But after trying the end frames (*a*, *a*) with an arrangement quite similar to the one you suggest, I feel sure I would not like it. The bees trouble by building little bits of comb, uniting the ends of the frames of the main hives to these single crosswise combs. By using a wide frame with tin separators, and having the separators turned next to the ends of the brood-frames, possibly it might work very well. Yet I do not see how we could very well avoid being obliged to make these extra frames a little shallower than the one occupying the main part of the hive. Dummies have often been suggested, but I have always found them decidedly objectionable. They occupy room where the bees might be storing honey. Then they are always getting stuck fast unless they are arranged exactly like a brood-comb. If so, I should very much prefer having a brood-comb to a useless board.

---

* By using smaller frames than the standard L., or dummies instead of frames, any standard L. hive might be made on this plan.

I believe we pretty nearly agree in regard to patents; for all that, I would suggest that the improvements in bee culture are almost invariably found to be the work of many people; or, if you please, the result of little suggestions thrown out by a great many bee-keepers. In view of this, can one man very consistently attempt to monopolize the whole of any invention?

We all of us return kind regards to you, and rejoice that you are once more able to give us the benefit of your great knowledge and experience in every thing pertaining to the hive and honey-bees.

THE COMBINED CRATE AND SHIPPING-CASE.

ALSO SOMETHING ABOUT ONE-PIECE AND DOVETAILED SECTIONS.

IN April number of GLEANINGS, page 176, friend Heddon gives notice that in your next issue he will give what he regards as clear objections to my section and system of surplusage, and at the same time professes his readiness to be converted if he is mistaken in his conclusions. Considering that friend Heddon is getting to be quite a magnate in our profession, this month's notice of his intention to demolish our system of surplusage was, indeed, a great kindness; but after waiting two whole months for his attack, I am somewhat astonished to learn that friend H. has never used a combined crate and case (see page 315, June number of GLEANINGS), and I confess that, until he consents to do so, I fear my chances of converting him are very slim, in view of what has already been said by those who have made this system a practical success. His arguments are too much like those of the man who, after doing a vast deal of thinking, tried to prove to another that it was impossible for a certain tree to bear fruit, when that other had for years past been enjoying the products of that very tree. Fancy some one trying to convince friend H. that the Given press or wired comb fdn. is a failure. But, friend H. says that he has one of my sections, and that he "can not accept it as a good one; that it has not the strength of good all-dovetailed work." As the section referred to is one that I sent him, and had to take its chances in the mail-bags, very likely it had some weak joints when he received it. I presume all understand what friend Heddon means by using the language just quoted, since he advertises his establishment as "Headquarters for the Nicest of All-Dovetailed Sections." Well, I have one of friend H.'s sections that he sent me as a sample several months ago, and it is really a nicely finished section. When first received I compared it with one of my nailed one-piece sections; and as far as strength is concerned, there was but little choice between them. I told our "new partner" that we would lay them together on the shelf for a time, until they became thoroughly dry, and compare them again.

Now, when friend Heddon's article appeared, and I read the passage quoted above, I was reminded of the two sections, and had them compared once more. My "new partner's" comment was, "If Mr. Heddon could handle them now, he would take back what he said about your section not being as strong, etc.;" and mine was, and is yet, and if his section was made a little heavier, and nailed or glued at all four corners, it would be a good one. As it is possible you have not seen one of friend H.'s sections, I will mail you the one referred to; and as you already have some of mine, in view of friend H.'s criticism, I want you to tell the readers of GLEANINGS which you regard as the better section.

Perhaps friend H. is correct about his section being handsomer appearing than the one engraved in GLEANINGS; but this is not our regular style of section, which, you will remark, has closed *ends*, except a bee-space at both top and bottom, a style which in appearance and handling, we think, compares favorably with any other. As we use both side and end wedges with the crate, it is an easy matter to get either style in or out of the same.

If friend Heddon will consent to try some of my packages, I will furnish them free of charge, and I am confident he will be pleased with them.

Capac, Mich., June 21, 1883. BYRON WALKER.

I am afraid, friends, we are getting into a little controversial mood. Let us all try to excel in our different ways. But at the same time can we not be very careful about any reflections by any one on each other's ways of doing things that have even a shadow of unkindness about them? The combined-crate system of work is obtaining very great favor this season. As you and friend Heddon both agree on the importance of narrow sections and no separators, perhaps you will eventually agree pretty nearly in regard to a case for holding them. In regard to the comparative strength of one-piece sections and those dovetailed all around, I might say that only yesterday I accidentally knocked friend Heddon's sample section off the window-sill, and with it one of the one-piece sections. While the one-piece was not even knocked out of shape, the other tumbled into four pieces at once. Very likely this is not a fair test, because a dovetailed section when in the hive would be pretty well glued at the corners by the bees, and very likely the other would also, but perhaps to a less degree. Friend Heddon's sections are very handsome, and, in fact, they are made of that beautiful white poplar that friend Manum always furnishes. In appearance, I should judge they were some that friend H. purchased from friend Manum. Will it not be well for supply dealers to keep on hand both kinds? If friend Manum keeps up the standard of his work as he has done, his sections are bound to take the foremost rank in the market. Could he not make us an extra nice one-piece section of the same material?

MRS. HARRISON'S REPORT ON WINTERING.

ALSO A FEW WORDS ABOUT OVERSTOCKING.

OUR bees are in fine condition to-day, June 11th, and there is a magnificent bloom of white clover; but there have been as yet only two or three days when bees could gather honey. It was astonishing, how much was gathered on those two warm, sunshiny days. Cool wet weather is the rule, since the advent of clover bloom, and will insure good fall bee pasture, if it spoils the honey harvest of the present.

Our bees wintered well, with the exception of some colonies that I experimented upon. I thought that I would try a tall hive, and so made one by putting one-half of the frames of the lower hive in the upper story of the L. hives, and division-boards each side, filling the intervening spaces with dry cherry leaves. I congratulated myself that, if the shallow frames failed, these surely would come through all right, as the upper frames were solid with well-ripened honey, and the bees could crawl up as they needed it. During the severe cold weather I took a great deal of comfort thinking of these fourteen colonies, all packed so nicely, and it is well I did; for it was all the pay I ever received. Only two survived the winter, and these were very strong in early spring. They carried all the honey into the upper story, and built out their combs all white, as they do when honey is plentiful; but this early breeding was no benefit, as they were smaller than some others later in the season.

The loss was very slight, where Hill's device and chaff cushions were used. Four out of 70 colonies came through, though some "petered out" during spring. We noticed particularly, the past winter, that protection from winds is a great advantage, and facing the south a desideratum. Two hives that stood in the shade, and had no protection from winds, died during winter. Out of 22, standing on the east side of the house, only two failed at roll-call. The house was a good protection against west winds. These faced east.

I've been very much interested in reading what friend Pond has to say on "overstocking." The head of our firm has always contended in the affirmative of this question, while I have been upon the negative. There is a town in this county which the resident bee-keepers claim to be overstocked. I went on an excursion to a town forty miles distant, and, after leaving the vicinity of the Illinois River, I looked out of either side of the car on to a sea of waving corn — corn joining sky. I saw no waste land; it was all subdued by the plow, with the exception of now and then a wet piece, which was drained, and yearly mowed for hay. When fields are yearly cultivated, what chance have perennial flowers? Goldenrod, horsemint, figwort, etc., can find an abiding-place only in the hedges, and along railroads. Where we live, in the valley of the Illinois River, there is very rich land that has formerly produced immense crops of corn; but of late years, probably owing to tile drainage, it has been subject to overflow; and their owners getting discouraged, let it lie idle, and Spanish needles and blackheart (*polygonum*) grow there in great luxuriance.

Friend Pond, the rocks of New England are the bees' best friend, for they protect the flowers from plows, cultivators, harrows, reapers, etc. When I journeyed through your country I observed much land undisturbed by the plow, which is in such striking contrast to our own. Here the goldenrod was blooming in the greatest profusion; but as soon as arable land was reached, not a blossom was to be seen. Along the rivers and streams of the West, where there is woody, unbroken land, the bees fare better than on our fertile prairies, where king Corn rules. MRS. L. HARRISON.

Peoria, Ill., June 11, 1883.

HOW FAR AND HOW FAST MAY A SWARM OF BEES GO?

SOME VALUABLE FACTS IN THE MATTER.

OVER thirty years ago, when this country was new and but thinly settled, my father kept bees; and quite frequently we lost swarms by their leaving for parts unknown. One day, while following an absconding swarm, I was crossing a cornfield where a young man was plowing corn, near the opposite side of the field from where I entered it; and seeing me coming on the run, and ringing an old cow-bell, he took in the situation at a glance, and hastily unhitched his horse from the plow, and threw down the fence, led it out on to the prairie, and mounted ready for a chase; and as the bees passed over him he gave pursuit, having to keep his horse on the gallop to keep up with them. He followed those bees seven miles, and they then crossed the Cedar River at the same rate of speed as when he first started in pursuit; and the water being too deep to ford, he had to return without the bees. Fully half the distance followed was through open timber, yet the bees kept right on without making an effort to stop and cluster.

DO BEES EVER GO OFF WITHOUT CLUSTERING?

I know that they do. I have watched them coming out of the hive, and leave without clustering.

DO BEES REMEMBER THEIR OLD LOCATION OVER WINTER?

Last fall I put 25 hives of bees in my cellar; and wishing to change the location of my apiary about 100 feet to the south of the old location, I put out all of my bees on the new stands, and, thinks I, now I will see how many bees will find their old places. A few bees flew around the old stands; but on looking I found as many bees to the east, west, and south of the new location as were to the north at the old stands. Near sundown I went to the old stands to look for bees; but not a bee was there; although 8 empty hives stood promiscuously around, not a solitary bee took up its residence therein. I lost no bees from spring dwindling. My cellar is damp, and requires to be drained; and at one time the drain clogged up so that water covered the floor of the cellar to the depth of 2 inches, with no bad results to the bees. I keep every thing needed in the family in the cellar, such as potatoes, cabbage, turnips, etc. I have wintered successfully in the same cellar for several years. We are, this 9th of June, feeding our bees, although the ground is covered with white-clover bloom. The continual rains wash all the nectar away, and our bees would starve did we not feed them. Last year we fed until June 20, for the same cause, and it looks as if we must feed as long this season. W. S. FULTZ.

Muscatine, Iowa, June 9, 1883.

There, friend F., you have furnished us a case that comes pretty near covering the very ground we wanted. I have often thought of following swarms on horseback; but around here the fences would be an obstacle. You were near the open prairie, and that boy plowing, alarmed in time by your cow-bell (who says cow-bells don't do good?) was just in trim to give us the desired information we now want. Doubtless, he thought he had made a failure of it; but if you know where he is now, just tell him we have placed a dollar to his credit, for that seven-mile ride. Let us sum up. We now know that a swarm of bees sometimes goes as far as seven miles, and that they travel, when on the "war-path," sometimes, at least, as fast as a horse gallops, and now we want to know how fast that horse went. Probably 10 miles an hour, friend F.?—I think some bees, or bees sometimes, perhaps, remember their location the fall before; and other times, or other bees, do not.

A NEW BEE JOURNAL.

OF late, the advent of a new bee journal has become quite a novelty; more so, in fact, than their departure. But here lies before us a genuine sample of "Vol. I., No. 1," of the *American Apiculturist*, S. M. Locke, Editor and Proprietor, Salem, Mass. It contains 24 pages of reading-matter, 5¾ x 9¼, besides 8 pages of advertisements. It is set in "long-primer" type, which is two sizes larger than this, leaded, making a very readable page. The press-work is very good, and great care seems to be taken by the proof-reader. The high quality of the advertisements is especially commendable. In short, Bro. Locke has left little if any room for complaint from any who want a good bee journal. Monthly; $1.00 a year.

The irrepressible and inimitable Hasty furnishes the following article, which we copy for its intrinsic merit, and as a fair sample of the journal:—

POPULAR MISAPPREHENSIONS IN REGARD TO BEE CULTURE.

"Fussing with bees," is what they call it, because, you see, they do not think it laborious enough to be called work—a very suitable occupation for confirmed invalids, and constitutionally tired and *re*-tired clergymen, and for ladies in search of a sphere. These ideas can not be squelched at once, but we can put in our protest, and some day or other the truth will prevail.

Some women can keep bees. And just so some women can raise forty acres of corn. Success in either path must be won by downright hard work. As a vocation for women, bee-keeping does have this much in its favor: that great tyrant, "Society," gives permission to keep bees; while if a woman essay the forty acres of corn, society would frown her down as an amazon. The woman who goes at bee-keeping as the half of female domestics go at housework, or as one-half of well-born daughters go at their various ways of disguising idleness, can do nothing else than fail.

Some invalids can get a few bees, and, by healthful work in the open air, build up their health while they are building up their apiary; but nothing but a ruinous failure could come of the attempt to run a large apiary at once—unless the alleged invalid had somewhere, either active or latent, a large capacity for work. Invalids that suffer seriously when exposed to hot sun, or in any way subject to overheating of the blood, had better let bee-keeping alone. A man who is going to run a hundred colonies of bees through the swarming season needs be a regular salamander, almost as much so as if he were a puddler of iron, or a steamboat fireman. A little rebate may be granted here. Nothing herein contained is intended to forbid a confirmed invalid, or any other man or woman, from keeping a few bees, and supplying her own table with honey.

Clergymen are subject to the same restraint as to a vocation that women are. Parishioners would kick up such a row about the matter that walking-papers would have to be made out, if the pastor should mend boats, or keep a grocery. Excepting work with the pen, scarce any thing could be named that would provoke so little opposition as bee-keeping—but no lazy folks need apply. At any rate, unless the support be very inadequate, and the need of more income quite urgent, a pastor should usually be content with a small apiary. A little change of thought, and its accompanying exercise in the open air, will not injure the quality of the Sunday's sermon, but improve it. Really, fellow-mortals, let us pity the sorrows of the poor clergymen—required to dress and live like $5000 a year, while receiving $300 and a donation of the cold-victual sort.

In thus affirming that bee-keeping is hard work, I do not assert that great strength is absolutely required. People who can lift but a small number of pounds may succeed, if that is all the disability. Strength often comes very handy, however; and considerable expenditure of muscle must be put forth for many hours of the day. I have been a farmer-boy under a good old farmer who was a foe to both leisure and play; but I think I never in my life wrought so many hours as last summer with my bees. Apiary work has much of it to be done in a half-bent posture, and is the harder on that account.

To go for another misapprehension, bee-keeping is very dirty work. Outsiders think it is nice—misled, probably, by the dainty purity of a section of clover honey. Alas! there is a difference between the product and the work, as much as there is between a nice sheet of white paper and the work of gathering and sorting the rags. If one contemplated becoming a sailor, he would regret the hard necessity of getting used to having his hands continually covered with pitch and tar. Between tar and propolis, there is scarce a penny to choose. There are agents that will remove propolis from the hands, but practically one has to get used to having his hands stuck up with it most of the time. If something that it will not do to defile must be touched, just rub the hands with soil or sawdust, or clench the smooth branch of a tree, and wrench the closed fingers around it until the propolis, partly rubbed off and partly glazed over, ceases for the moment to stick.

A brand-new misapprehension that has got afloat of late is that bee culture is enormously profitable, a regular bonanza, in fact, say 100 colonies yielding $50 each, equal to $5000 per year. I fear that the sulphurous and nigritudinous lies some brethren and sisters have been telling are responsible for much of this. When you find a bee-man who makes $5000 per year on his bees, just cast a net over him until the rest of us can come and take a good look. The net will last many years before it is worn out.

Another misapprehension that I fear has gained some currency is that apiculture is a matter of such simple routine that any person, even though not naturally ingenious or thoughtful, can easily master it. This looks to me as the most rank error of all. A bungler can not keep bees with success. In scarcely any other avocation is a living won by so large an expenditure of brain.

To all these disadvantages another must be added. The business has a spice of lottery about it. Frightful losses are liable to come in February, March, and April, sweeping away perhaps five hundred dollars' worth of bees as with the "bees-em" of destruction. Moreover, once in a while will come a summer in which scarcely a pound of surplus honey can be obtained. The downcast bee-man, with no income at all to draw on, must either buy barrels of sugar to feed the bees for their winter food, or sacrifice a part of them. That is to say, part must be sold for the trifle they will bring, and the money spent in sugar to winter the rest; or else colonies must be united with each other, possibly some destroyed altogether, and what honey there is concentrated in a few hives, to keep a fraction of the apiary alive till spring.

There, now! I've pretty much said it. And there are lots of things on the other side of the shield that I have not tried to say. With all the drawbacks, bee-keeping is an intensely fascinating pursuit. Many fail. Some succeed. A very few employ men

and run many apiaries and succeed; bringing up the theoretical possibilities of income pretty high. The conclusion of the whole matter is, that if you have the bee fever, and have it bad, past all cure, don't stand groaning, but plunge in—and the editor and his correspondents, they'll hold your bonnet.

INEFFICIENT EXPRESS AND RAILROAD OFFICIALS.

WHAT SHALL WE DO WITH THEM?

A FRIEND wrote us that his missing goods were found at a station beyond his own, and I asked if it was through any fault in the address, or in shipping. He replies:

Dear Sir: No fault of yours. I think your injunction to push through without delay was fulfilled to the letter, but carried *past* the station to one 10 miles below, and used, no doubt, as a foot-stool by office loafers for a month. When we commenced to complain, then "Benton" was notified and I got my goods in good order. Perhaps a whipping-post along this express line would be of use.

June 12, 1883. W. B. B.

Gently, friend B. I know how annoying such things are, and I know it does seem sometimes as if it would be no more than simple justice, that a whip should be taken to one so fearfully dead to the interests of his fellow-men, as to let valuable property lie, day after day, without taking a thought or care as to what ought to be done about it. Just last summer, a barrel of valuable oil lay by our station in the hot sun, month after month, until the oil ran out and made a greasy mud-hole, and yet no one took the pains to notify the shipper where it was, or what the trouble was. Could I have found a mark on the goods, I would have sent a notice myself. Cases of this kind are not uncommon, either; and meanwhile somebody is probably sending tracers, and having lots of trouble, waiting and waiting for the goods that never come; and the railroad company, after another long delay, pays for them, because they can not be found. Oh how this world needs faithful men, who will look after the property of others as they would look after their *own* property! or, in other words, who have it in their hearts to "love thy neighbor as thyself." It isn't whipping they want, friends; it is patient and kind teaching, and the spirit of Him who wept over the sins of poor, sluggish, indolent humanity.

DO SWARMS GO OFF WITHOUT CLUSTERING?

ADDITIONAL EVIDENCE.

I WILL count one of a score who have seen the first swarm come out and go off without alighting. And in order to be short, I will just say that, in the year 1839, I commenced keeping house with a number of bees in what we called "gum" hives. I had been taught, that in order to have good luck with bees we would have to brimstone one-half the increase, and that bees never go to the woods without first alighting. Now I'll testify.

In the spring of 1840 I was called from home in swarming-time; left the bees in care of my wife. I came home at noon and found her gone; in a few minutes my wife came in, pretty well warmed up. She said the bees swarmed, and did not alight, but that she followed them to a tree about half a mile from the house. I chopped the tree down in the evening, sawed it off, drew it home and saved the bees. So you see I was half ready to believe that my bees *would* swarm and go to the woods without alighting.

About ten years passed away, and during that time the number increased to about 50 hives. I made it a point to watch them closely, in order to avoid doubling up. One day while sitting under a shade-tree in the bee-yard I saw a swarm come out, and just as soon as all were out they took a bee-line for some timber about a mile from home. I followed them to their home in a tree.

These two cases satisfy me that bees will swarm and go off without alighting. And still further: I have had a swarm leave me since I have lived in Wisconsin. And for other proof, see T. B. Miner's American Bee-keeper's *Manual*, page 285.

From my own experience I am led to believe that, when bees have selected a home, they go to it without clustering; and that, when they swarm out and alight, they send out scouts to hunt up a home. For this reason, I believe that it is well to hive as soon as they have clustered, and move them to their stand before the scouts get back.

Bees have dwindled very badly this spring. Some of my friends are ready to give up keeping bees. Some lost one-half; others lost all. As for myself, I put 30 hives in the cellar last fall, and still have that number in good condition. I have no swarms at this date. Some queen-cells are started.

JOHN CLINE.

Fayette, Wis., June 12, 1883.

PATENT DIVISION-BOARDS.

ALSO SOMETHING ABOUT BEE-HIVE PATENTS IN GENERAL.

ON page 329 of GLEANINGS I see that Mitchell's patent division-board is once more referred to. That Mitchell has a patent on *a* division-board, may be true; but that his patent covers *the* division-board, is not true. So has Forncrook a patent on *a* one-piece section; but his patent does not by any means cover *the* one-piece section. It will be observed that the words *a* and *the* have sometimes quite a different meaning. When a patent simply covers *a* thing, and not *the* thing itself, it is generally of very little value, except for black-mailing purposes; timid people being very easily frightened.

I wish now to call special attention to a fact that seems to have been overlooked by some, to-wit: A division-board *patented* to Rev. L. L. Langstroth, Oct. 5, 1852, No. 9300—over 30 years ago!—said device being almost the only divider now in use. Please turn to page 407, 3d revised edition of Mr. Langstroth's work on "The Hive and Honey-Bee," and read carefully the 3d claim in the L. patent, as follows:

"A divider, substantially as described, in combination with a movable cover, allowing the divider to be inserted from above, between the ranges of comb."

Directions for making this division-board may be found on page 376, same book, as follows:

"One piece, 18⅛"x9⅜"x⅞", each side of each end made ¼" beveling, for easy adjustment. One piece, ⅝"x⅞"x19¾", nailed on the first piece, like the top-piece of the movable-comb frames. By this divider, the size of any hive may be diminished at will."

Now turn to page 96, of the same book, and read the following:

"By means of a movable partition, my hive can be adjusted, in a few moments, to the wants of any colony, however small; and with equal facility be enlarged, from time to time, or at once restored to its full dimensions."

As the Langstroth patent had a long life of 21 years, and then died, *root and branch*, Oct. 5, 1873, nearly ten years ago, it seems to me that any one ought to enjoy, without molestation, the legal right to make, use, or sell a division-board made and used "substantially as described" by Mr. Langstroth. But they who think otherwise will probably pay a royalty of some kind to Mitchell or his representatives, and perhaps it would not be best to deny such the privilege! M. M. BALDRIDGE.

St. Charles, Ill., June, 1883.

Thank you, friend B., for calling attention to something I knew quite well, but have strangely overlooked, in the many times I have exposed the Mitchell fraud. Those who have defended Mitchell (there are a few who have attempted a sort of defense of his course) would do well to consider the above.

LETTER FROM DR. BLANTON,

THE MOST EMINENT APIARIST IN THE MISSISSIPPI VALLEY.

WE copy the following from the *Planters' Journal*, published in Vicksburg, Miss.:

I herein send you a tabulated statement of the apiaries of Judge Harriman and Messrs. Adams and McLendon, of Chicot County, Arkansas, and Mr. Vaught and myself, of Washington County, Miss. The labor and shipping-cases are not deducted from the proceeds.

We consider the season of 1882 as more than an average one, but by no means extraordinary.

Judge Harriman's report is excellent, when you consider the great loss of swarms; his apiary is in a grove of forest-trees, and he failed to clip his queens' wings; and besides, he neglected his bees, owing to his judicial and plantation duties.

Bee-keeping is a science, and requires a great deal of study with a reasonable amount of enthusiasm, hard work, and *strict* attention.

One man can attend to one hundred colonies.

With comb foundation as a guide, that the bees may build their combs straight; with the movable frame, to manipulate your combs and bees with ease; the uncapping-knife and extractor, to remove the honey by centrifugal force; the smoker to quiet the little workers, and the queen-cage to control and introduce your queen—with this furniture, so to speak, you are prepared for work; and without any one of these, you will certainly fail.

Honey should be taken from the hives almost as rapidly as the bees gather it, at least every ten days; and when they are bringing in the nectar *rapidly*, I extract from every comb that has any honey, even in the brood-chamber, and when not capped over; running the extractor slowly enough to discharge the honey without throwing out the eggs and larvæ. In a few hours there is enough honey stored for feeding the young bees. When the honey-flow slackens, go slow with your extractor, and never extract when the flow ceases. I ripen the honey by evaporation in large tanks covered with cheese-cloth.

I ship in new cypress barrels of 525 pounds net, and comb honey in 28-pound cases.

We never plant any thing for bees in this rich alluvial country. Every tree, shrub, and plant yields more or less honey. I have never known bees to be afflicted with any disease.

To make a specialty of bee-keeping on a large scale, there is nothing that pays more for the capital invested; but do not suppose there is no hard work in it. The bee-keeper goes to church in swarming season only when the sun goes down.

TABULATED REPORT.

FOR THE YEAR 1882. NAME.	Number of Colonies commenced Season.	Number of Colonies closed Season.	Swarms Lost.	Pounds of Extr'd Honey.	Pounds of Comb Honey.	Total No. lbs. of Honey.	Pounds per Colony.	Pounds of Wax.	Total Proceeds.	Proceeds per Colony.	Number of Increase of Colonies.	Value of Increase.	Total Proceeds of Apiary.	Total Proceeds per Col'y.
Robert J. Adams........	3	15	2	1213	72	1285	428	8	$ 113 52	$37 84	12	$ 36 00	$ 149 52	$49 84
G. C. Vaught........	39	76	25	1390	5060	6450	165	175	847 75	21 73	37	111 00	958 75	24 56
Judge H. A. Harriman..	65	90	80	7500	100	7600	118	40	630 40	9 90	25	75 00	705 40	10 73
William McLendon......	70	130	8	9000	110	9110	130	210	796 60	11 09	60	180 00	976 50	13 95
Dr. O. M. Blanton........	256	358	26	30002	840	30842	120	100	2532 34	9 89	102	306 00	2838 37	11 08
Totals................	433	669	141	49105	6182	55287	127⅔	593	$4920 61	$11 36	236	$ 708 00	$5628 64	$13 00

These figures seem extraordinary; yet they can be exceeded by the gentlemen, with their present experience and a good season.

O. M. BLANTON.

Greenville, Miss., Feb. 8, 1883.

"LUNATIC" BEES, ETC.

ALSO SOME ITEMS FROM GEORGIA.

I AM somewhat inclined to write a letter about bees, as I hope to gain a little information by asking a few questions. I will begin by saying that some of my bees seem to be fit subjects for the lunatic asylum. At any rate, if I were to see people act as foolish as these bees do, I would decide that the asylum would be the proper place for them. I will try to tell how they do. I have only two hives at present, which seem demented. They spread themselves over the front of the hive above the entrance, nearly as thick as they can stand, and move back and forth as if they were raking hay. This movement they keep up incessantly through the day, and, for aught I know, through the night too. If they were as industrious at gathering honey, as they are at this raking business, I should be better pleased with them. What does it mean? Somebody please explain. I have seen such actions among my bees before this year, but I have never seen any description of it in any bee book or paper.

Do young queens destroy remaining cells? This may be so where there are no workers, as in the lamp nursery; but in a full colony, I am inclined to think the workers attend to that business. At least, this has been my experience. I have seen the workers at it while the young queen was leisurely surveying the combs in a different part of the hive.

I have often wondered how it is that, in the Northern States and Canada, the bee industry is so much more successful than in the South. Here, all we need for wintering is plenty of bees and honey; while in your section you must have houses and cellars and chaff and leaves and straw and cushions, and many other *devices*, too tedious to mention, and yet you say you get 100, 200, or 300 lbs. of honey from one colony in a season. Why, sir, if we could get 100 lbs. average from each colony, we would not ask for a better fortune than 100 colonies of bees to start with. Perhaps there is more in the *man* than in the *locality*. If that is so, please send some "sure-enough" bee-man here to teach us how to do it.

Our bees have stored but little honey up to this time. We have had no "swarming extraordinary" this year, as we have had only 11 natural swarms up to this time. J. M. HARRIS.

Cedartown, Polk Co., Ga., June 16, 1883.

Another friend tells us of tramp bees, and now we have lunatic bees. Yes, I have witnessed the same phenomenon, and I can not tell what they are doing, unless it is scraping off the boards around their doorway, much in the same way the good housewife sweeps and scours the floor and doorsteps. With us they usually take up this employment when there is but little to be found in the fields — after basswood has failed, for instance. I believe the newly hatched queen usually bites open the cell, and the bees then take it in hand, and tear the cell down and carry off the embryo queen piecemeal.—I suspect we get more honey in the North, because of the men, the locality, and the influences of the climate on the men.

DANGER OF OVERSTOCKING.

WHAT HEDDON SAYS.

I HAVE read Bro. Pond's criticism on my views regarding the above subject, as penned by him on page 315, present volume. I thank him very much for his eulogy of my ability as a bee-keeper, and I am sorry he can not give me more credit as an honest and unselfish man. However, the same way that I have gained his good opinion in the one respect, I will try to gain it in the other. I have a little different philosophy from Bro. Pond. When I find a man possessing the amount of knowledge and analytical power that he gives me credit for, I always find him either too wise to allow himself to be immoral; or, if he is, too keen to write his immorality or selfishness to the public. Regarding the "sugar-coated pill," and the "suspicion that troubles" me, allow me to say to Bro. Pond, that my pill was not created as an antidote for any internal trouble, but for an *external* one. Does not friend Pond well know that, years ago, when I was alone in showing up facts upon this subject, reprimanding the vile practice of some supply dealers in trying to get all classes into our pursuit, defaming the skill of the few who were succeeding, by heralding the "glad tidings of great joy," that honey-producing was all gold, just the thing for sick men and weary women — in fact, all persons out of a job, who had failed at all else; when no Dr. Miller, Hutchinson, House, Hasty, and a host of others were there to help me; when the few who did see the point had not the bravery to stem the current of the calumnies of the majority, that then I was called "selfish," "mercenary," "scared," etc.?

Suppose you and I and a few others had a "corner" on honey-producing. Is it undue selfishness to try to keep that corner exclusive? Our editor has over 5000 names of bee-keepers. I wish I had them. I want to place my circular in fair competition with his. Is that list open to me? I will allow any one to copy my list who wants to, who will do so, making me but little trouble. I will hire it done for them. But I will not put afloat false reports, because I deal in supplies. When George Grimm tells me his and his father's long experience with many hundred colonies, was that when over 40 colonies were kept in one bee range? The pro-rata yield was very perceptibly lessened. When Hetherington, Harbison, and Oatman tell us by their *acts*, that, after about so many colonies, we had better sell, or move on and increase, I am forced to value *every* inch of the field I occupy. I would not have another put a single colony in my field — mine by right of priority; and, in the language of the great Confucius, I will "not do to others that which I would not have them do to me."

Friend Pond, if I know your experience as a honey-producer correctly, I am not willing to admit you as good authority on the subject under discussion. Of sizes of frames, safe methods of wintering, the case is different; but, close that law office; commence poor, feed and clothe the ones you love, and who love you, with the products of the bees, or go hungry to bed, and I will admit you, and I will have you as earnest on our side of this question as I am.

I have sold, during the past spring, 84 colonies of bees. I have 150 left in my apiary. I sold 2 yesterday for $20.00. Well, my field, if exhaustless as it is supposed to be by the doctrines taught in friend Pond's article, $40.00 would not have purchased those two colonies. I have fixtures and knowledge to make them worth more than that to me, while they may prove a poor investment, at half the price, to the purchaser. My field is my capital, to a great degree. I am the friend of every bee-keeper that is, now and at all times. I can do him no greater service than do all in my power to controvert the action of many to plant in this path opposition, both in the field and the market. The great law of supply and demand, and influencing prices, has not yet deserted the realm of honey-production.

Dowagiac, Mich. JAMES HEDDON.

Friend H., there is just one little sentence in the above which I feel like protesting against. You have used a quotation from the Bible in a sort of irreverent way that I can not think wise or well, even though your views of such things should differ from those held by some of the rest of us. We are a mixed company, remember; and to shock people, where no good can come from so doing, I can hardly think either courteous or kind.—In regard to our list of bee-keepers, it is now something like 150,000, and represents the labor of several clerks for several years past. As the names are printed in alphabetical order, and no name appears twice, the task and cost of getting it up is enormous. I have sold some of the sheets for 50 cents per 1000 names; but unless I was satisfied they were wanted for advertising good and honest goods, or for sending out circulars that were fit to be put into the hands of the children of our land, they could not be had at any price. The list has cost me, in cash paid out for advertising, and for the labor of clerks, perhaps over $2000. Do you think I ought to give them away? Do you think anybody could go to your office and copy off the names for much less than 50 cents per 1000, friend H.?

I should not have brought this matter in here as I have, did it not seem as if some explanation was demanded; and, come to think of it, I wonder if we are not all a little out of order. I think we will lay most of the blame on friend Pond, for writing in regard to the matter of overstocking in a way that I can not but feel was hardly the thing toward friend Heddon, even if he did try to put it kindly. Shall we not now drop the matter right where it is?

D. A. JONES IN REGARD TO THE PURITY OF ITALIAN BEES.

ARE THEY A HYBRID RACE?

I INCLOSE an item, clipped from the Montreal *Weekly Witness*, written by our esteemed friend, D. A. Jones, of Beeton. It so entirely agrees with the notions that I have had, that I would like you to publish it. ILA MICHENER.

Low Banks, Ont., Canada, June 15, 1883.

ITALIAN BEES.

SIR I write you concerning the work of Italian bees, a subject which apparently admits of a variety of opinions. Last summer I bought a dollar Italian queen from a reliable breeder, which I safely introduced, and which in due time populated the colony with bees. Not being at all acquainted with this variety of our "little pets," and not being certain of their purity, I am at a loss as to what to designate them. I remember reading an article in a bee paper, to the effect that Italians as a rule show the three bands only when expanded with honey; and again in Prof. Cook's new Manual I read they are always visible. The progeny of my queen show but two bands, when in a normal condition, although the third is present, but only showing itself when the abdomen is elongated. They also appear to be more vindictive than their black neighbors, which would strengthen the opinion that they are hybrids. Of course, I will be able to discern as soon as drones show themselves, as from such queens, I believe, they are always pure. Thinking, however, a full explanation of the matter from one of your experience could not fail to be instructive to some among the many readers of the Witness, I take the liberty of thus addressing you. J. BORLASE WARREN.

Gamebridge, Ont.

You will not be able to judge of their purity by the drones, as queens bred from pure mothers, and mated with drones of another race, show *pure drones while the workers are hybrids*. Italians have usually been considered a pure race by many, but latterly there appears to be little ground for any other belief than that they are all hybrids; that they are only a cross of the Holy-Lands and blacks in Italy, and their breedings. Most of the black blood has been bred out by the constant breeding of hundreds of years; and the changes in food, climate, and surroundings, for this long period, has tended somewhat to change, and to a certain extent form a distinct race of bees called Italians. I, previous to my travels in Europe, Asia, and Africa, when searching for new and choice races of bees, found that what were called "pure" Italians varied very much; that they were not inclined to duplicate themselves; that by selecting the dark strain, and following that course of breeding, I could produce black bees; or by selecting the lighter, I could breed lighter and brighter, until they were just as handsome as Holy-Lands. It was always a mystery to me how a pure Italian, imported from Italy, could breed such a variety of bees; but after having traveled, and investigated the matter, I had no difficulty in arriving at a conclusion. I found blacks and hybrids in France, Germany, Austria, Switzerland, and also in parts of Italy. I also found in the Sicilian Islands black bees, and some slightly crossed with Italians, but not as black as the German or French, as the Sicilian seemed to have more and longer gray hairs on the abdomen. Now, from Mount Ætna all the way around the Eastern coast to Catania, the northeast point next to Italy, for many miles the channel is so narrow that bees in swarming can and do cross from Italy to Sicily, and *vice versa*. Just across the Adriatic Sea, along the Dalmatian coast, and on both sides of the Dalmatian coast, and on both sides of the Dalmatian range of mountains, there are the finest, and, I believe, the best blacks in the world. All these facts go to show that they (the so-called Italians) have been imported from Asia long ago, and the evidence is made still stronger when it is remembered that the trade from Palestine and Cyprus passed up through the Grecian archipelago, crossing the Adriatic Sea to Italy, and that honey and wax were two of the principal articles of commerce. No doubt, the finer and better bees from Palestine and Syria found their way into Italy in large numbers. It would seem hard to state just what we should consider pure; perhaps the three gold bands will be found the best test in the matter.

I am aware that friend Jones does not agree with several of the friends who have visited Italy, in regard to finding black bees there; but as his investigations were much more extensive than any other, very likely he is right. I confess I can not quite see, though, why the same does not apply to the Cyprians and Holy-Lands as well. In regard to color, this can be changed either one way or the other, with almost all of the animal kingdom, by careful selection in breeding. Providing we get the honey, what does it matter what we call them? In connection with this subject, I believe that all agree that crossing the Holy-Lands with the Italians always produces gentler bees, while crossing blacks with Italians has exactly the reverse effect.

In speaking of bees crossing the channel, friend Jones strikes on the question before us now, in regard to how far a swarm of bees may fly; and as we found that bees fly much further over a sheet of water than over land, doubtless swarms would do the same. If they "lit out" to go across, they would have to cross or die, and so they might fly across, where the channel was as much as ten miles; and we would naturally suppose that after-swarms, led by giddy young queens, would be the ones to make the "long stretches."

SEASONABLE HINTS, ETC.

DRONE OR WORKER COMB FOR SECTIONS.

I HAVE used drone and worker fdn. for sections; think I shall use only worker hereafter; drone will do when honey is coming in plentifully; but in a poor season, when but little honey is stored in the sections, the queen is almost sure to lay in those drone combs, even if you use a separator; especially is this the case when there is no drone comb in the brood-chamber. I always like to have at least some drone comb in the brood-chamber, as they are better satisfied than if there is none.

SWARMING WITH CLIPPED QUEEN.

Will swarms return when three or four unite and have no queen among them? Yesterday four swarms came out about the same time, uniting and clustering on a peach-tree, which I had to prop up to keep it from breaking. Well, now, what was to be done? I removed the parent hives, setting others in their place, thinking each swarm would return. They had scarcely settled when they began to fly in the air, circling around for some time; some entering other hives, and in a short time clustered on the same peach-tree. I then got the fountain pump and gave them a good shower, and put them in four hives, giving each one a queen. Well, now, what would have happened had the queen's wings not been clipped? Will those who are averse to clipping queens' wings please explain how to manage such affairs? Friend Doolittle, you advise clipping the queen's wings, and so do I; but you don't explain how to manage swarms when they cluster together. Won't you explain?

QUEENS NOT FOLLOWING THE SWARM.

If you can not find the queen when they swarm, and she has her wing clipped, just open the hive and see if she is not yet in there. She will sometimes not come out with the bees.

CHAFF HIVES FOR A COLD SPRING.

I prepared 33 colonies for winter — 19 in Simplicity, and 14 in chaff hives. Those in the Simplicity hives were packed with chaff, and division-boards used. I also use division-boards in my chaff hives. They seemed to winter about alike, and were fully as strong in bees when they were unpacked, as those in the chaff hives; but after they were unpacked, they seemed to dwindle some, and increased very slowly, while those in the chaff hives increased right along, and were not much affected by the cold, unfavorable spring. H. J. SCHROCK.

Goshen, Ind., June 17, 1883.

"Remindery,"

Or Department for duties to be attended to this month.

A GREAT flood of honey is upon us. Reports of the wonderful crop of white clover come from all sides; and the best part of it is, that there is honey in the blossoms, and has been from the first. Usually we have a period of from two to three weeks between fruit-bloom and clover; but this year clover came right on the heels of fruit-bloom, and, in some localities, even before locust-bloom. Now, the thing to be done is to save the honey. Don't sit down helpless, and say you can't, but just take care of it, and save every particle, in spite of circumstances. Ever so many are just now writing for more hives, frames, and boxes, saying they had no idea of such a flood of honey, and were unprepared for it; and that if they can't have their things at once, the honey will be lost. Of course, we will do all we can for you; but I tell you, the honey must not be lost, and need not be lost. It does a bee-keeper good to be pushed once in a while, and to be thrown on his own resources. It develops his inventive genius. Let us see what can be done while you are waiting for your things, or at a time when honey and swarms are coming, and you have no accommodations for either.

Before I would hive swarms in kegs and boxes, as is often done, I would drive stakes in the ground, and tack a strip across, to hang the frames on. If you can't get the strips and stakes otherwise, buy common plasterer's lath, and I think you can all get these, without much trouble. Put the lath up edgewise, for the frames to hang on, and have them come just the right distance apart. Now hang in one frame of unsealed brood, to hold your swarm, and to start the bees right; then lay strips of lath along on top, in place of frames. Watch them every day, to make the bees build the combs straight and true. I think it is the nicest fun in the world to guide them in the structure of these new, nice combs. Of course, you will let this work go on only until your frames and hives come. When they do, break out the new combs and fasten them in the frames with melted wax. I would take all white combs without brood, for fastening into section boxes. I almost forgot to say, our impromptu hive is to be covered with a cloth, held down at the edges with bricks and stones, to give the bees protection enough, so they won't swarm out. To keep off the rain, lay a board on too, held in place by a stone. If you run out of section boxes, split common lath, plane the inside and edges, and cut them up in a miter-box, and nail with wire nails or brads. This is slow and expensive work; but it is better than losing the honey. Find somebody in your neighborhood who wants a job, and make him happy by setting him to work. School children, with some older person to look after them, will take to this kind of employment like ducks to water; and if you are the man you ought to be, or woman either, you can teach them to do *nice* work.

If your hives want extracting, and no extractor is to be had, make some kind of a home-made extractor. Any barrel or can will do that will hold the honey, and allow the frames to revolve. A wooden frame, covered with wire cloth, can be made in a little while, and a crank, directly on the top of the shaft, will extract very well, only it takes a little more time. *Don't let a drop of honey be lost.* You can stand it to work until 10 o'clock at night, and be up by four in the morning, for a little while, until you get ahead of the bees a little. If you get very sleepy, you can go to bed a little earlier; but don't cut off the morning hours. I rather like being crowded that way for a while. It is fun to go to bed and drop asleep almost as soon as your head touches the pillow, and it is fun, too, after you are up, to see the sun roll up and herald in the new day, while the bees rub their noses and "light out" to their work. Mind you, there is to be no gossiping and loafing these days; no picnicking or excursions for a bee-keeper in the month of June, unless he is a smarter man than the most of us.

Look out, too, about queenless colonies. If you are raising queens, never let a great big strong swarm be idling away its time, waiting for a queen-cell to hatch, or for a young queen to get to laying. A bee-keeper can always find something profitable to do in June, if he has as many as 40 or 50 colonies, and I never saw the apiary yet of that number, where I could not point out something that needed immediate attention. "Do ye mind?"

FROM DOOLITTLE.

BEES FLYING 90 MILES AN HOUR.

I SEE by the last two numbers of GLEANINGS, that what I said of the experiment, regarding bees being let to fly from a train of cars going 30 miles an hour, as given by P. H. Elwood, has created quite a stir, and the whole talk seems directed toward Doolittle, while as yet I have not said a word regarding what I thought in the matter. Several years ago, when there was quite an excitement about overstocking a locality with bees, I said that bees flew from 4 to 7 miles from their hives for stores; and in trying to prove the fact, I mentioned the "90 miles an hour" experiment, as above. But for all my reasoning, giving facts, etc., friend Root was an unbeliever till friend March came forward and converted him. At that time I made some experiments to see how fast bees fly; and as a result I came to the conclusion that a bee could fly 75 miles an hour in a still day, with a clear atmosphere, while in a damp, muggy, or windy time, they do not fly more than from one-third to one-half as fast. Also, the bee does not get at full speed till half a mile or more from home, while, when returning with a load, the last half-mile is gone over very slowly, more especially as the hive appears in sight. That a bee can not breast a heavy gale, I am well aware, as their wings are not made for that purpose, as are those of a duck, and some other strong-flying birds; but of one thing Mr. Shuck is mistaken; which is, that a wind blowing 90 miles an hour would take the hives out of my yard; for we had a wind blowing 82 miles an hour, three years ago, and not a hive was stirred, although several houses and barns had their roofs damaged to some extent. But, to the experiments I tried:

The special New York express train running on the N. Y. C. & H. R. R. R. runs 60 miles an hour at certain places between Rochester and Syracuse; and by standing a rod or so from it as it passed I was enabled to get the rate of speed which was required to make that time fixed in my mind so that I could guess pretty closely as to the relative flight of any object. About a mile from my apiary is a rise of ground over which the bees must pass in going for basswood toward the close of the harvest. Here I could hear the sound of the bees as they passed over; but I had, up to this time, seldom seen any, except in a strong wind, when the bees always fly nearer the ground. I lay down flat on my back, and placed my hands each side of my eyes, and looked steadily up to the sky. After a little I could see the bees pass; and to say that I was surprised at the rate of speed they possessed, in a still, clear day, is placing it mildly. After a careful comparison with the train going 60 miles an hour, I decided that 75 miles an hour was about the rate of speed the bee attained when going 4 to 6 miles from home for stores.

Again: A good horse will trot a mile in 3 minutes, and a man can run nearly as fast as a horse will trot, for a little way, say 15 or 20 rods. Thus a man can run at the rate of 20 miles an hour. Now, a swarm of bees does not fly in a straight line; that is, each bee does not fly in the direction the swarm is moving, for all observers are aware that each bee describes a circle, so that it looks as if the bees were going through the air in every direction. This will be observed at whatever rate of speed the swarm is going. Thus it will be seen that the bees travel about three times as fast as the distance made by the whole swarm. As there are swarms, when, under full headway, that no man can run fast enough to keep up with, even for a little way, this gives nearly the same result (75 miles an hour) as before.

Once more: The church which I attend is situated 2½ miles from my apiary, in the direction of the teasel fields; and in coming from church I often notice the bees going home with their loads of teasel honey, whenever they have a strong wind to face. At two miles from home they pass by me, facing quite a strong wind, at the rate of 25 or more miles an hour, while, when I get within one-fourth of a mile of home, I can easily drive my horse so as to keep up with them. As they come nearer, they fly still slower, so the horse need not go off a walk to keep up with them, at from 5 to 10 rods from the apiary. In a still, clear day I do not see any bees till I get near the apiary; but by stopping my horse I can hear them flying over at any place on the road.

Friend Root says, on page 314, that he has "often kept up with bees without driving fast, when they were going to and from a buckwheat field," but he does not say how near he was to his apiary, nor whether the day was clear and still. Friend Root, did you not "hazard that opinion" of bees flying from 10 to 15 miles an hour from what you had seen while within one-half mile of your apiary, on a windy or muggy day? If you have seen bees flying to and from a field, at a distance of one mile from their home, and one-half mile from the field of flowers, on a *still*, *clear* day, you have seen something I never have, except as I have given, where they flew over the rise of ground.

Borodino, N. Y. G. M. DOOLITTLE.

Thank you, friend D. Since you mention these things, and explain them, many facts come to mind to convince me you are at least not far from right. For instance, I do now remember that the bees were not far from their hives, when they flew alongside of our buggy. I have, too, noticed bees flying over a hill, when they seemed to go like a flash of light; and, by the way, I wonder how many of the friends have learned to see a bee on the wing. When you can hear them roaring overhead, look up, and you will see nothing; but after a great deal of trying you may get your eye on a single bee; and if you can turn your head fast enough to keep your eye on him, you will, of a sudden, discover not only this single bee, but a multitude, right alongside of him, moving with almost incredible speed. I once heard a roaring noise overhead, and looked up just in time to see a large swarm high up in the air, going at a speed so great that it seemed to me no horse in the world could keep up with them. They were out of sight in an instant. Now, we all know that swarms often go so slow that one can almost keep up with them on a walk. Who can say how fast they may go, when really in an emigrating mood? Now a word in regard to railway trains running 60 miles an hour. I have been told by good authority, or at least what I consider such, that trains do not get up to that speed, not even for a single mile. Have we an experienced railroad friend among our number who has seen this thing tested by actual, careful test?

A NEW HOME IN FLORIDA.

BY OUR OLD FRIEND DAMKOHLER.

MY present place is on Estero Creek, about 18 miles south of Fort Myers, and the same distance by water from Punta Rassa. I am situated on a beautiful navigable creek about from 20 to 100 feet wide, 12 feet deep when tidewater is in. The tide rises here only two feet. This is a healthier location, and not subject to overflow; free from malaria (the only sickness in this land), and very good land for oranges and fruit-trees. The land is mostly covered by the cabbage and saw palmetto; and on river or creek, by mangrove, cottonwood, and a dense shrub alongside the creek, shows the richest land. Live-oak, willow, persimmon, muscatine grape; in fact, every bush and shrub produces here, honey and flowers. Further back we have pine woods, mostly pitch pine, and cypress swamps. But don't think by the name of swamp we mean a nasty, unhealthful place full of miasma or malaria. I tell you, there is in the open streets of Medina at least ten times more malaria and sickness, and impurities in the atmosphere, than in the everglades or swamps of South Florida. Send your consumptives to these swamps, and in the course of two years they are young men again, full of new energy, and new blood and power. My selection was quick, and I think a good one too. I named my apiary the "Garden of Eden Apiary," on account of the many cabbage-palmetto trees which stand on the same, and as soon as I have more time I shall go down the coast and fetch and plant the royal palm on my land. I took from my old place 100 basswood, catalpa, tulip, and sourwood trees, and the fine pussy willows, and all thrive now well in the Florida sand, bringing forth buds and nice foliage. I believe in planting bee pasturage, even in Florida, too. The ground here is covered, besides the shrubs, with saw-palmetto, pennyroyal, buckberry, and flowers, which I do not know, of all descriptions, and at all seasons; 100 of the very choicest mulberries, for silk-producing, which I brought along, stand now in the beauty of their new dress.

VANILLA AS A HONEY-PLANT.

A Dr. Hansen, whom I had the honor to become acquainted with, and who took your address in order to become a subscriber to GLEANINGS, disclosed to me his secret in studying the propagation of the vanilla plant, and how to make it bearing fruit. This encouraged me to raise this plant, as it will grow here well, and is a fine honey-plant.

My 27 stands of bees which I brought here, some in weak condition, are doing well now, and breeding up well. They bring in honey of a very superior flavor and smell; but I did not know from what plant this delicious nectar came. But the bees started down river toward Estero Bay, which by bee-line may be 2½ miles distant. I never yet saw a bee on a flower or shrub around here, except for water, and when I gave them spoiled comb with honey, far away from the apiary, to lick up. Last Tuesday I concluded to go by boat to Punta Rassa, 16 miles distant; but tide, wind, and waves often compel us to be 3 or 4 days on this trip before we come home. As my enterprise here is hailed by all the few citizens, and they have a desire to help me on to success, they show a great sympathy for every thing. I told them of the beautiful honey which came in slowly; I asked about the different sorts of mangrove, of which there are more than 10,000 acres about blooming, and there are many different varieties. One gentleman took me by the hand, a little way from the house, to a great shrub. As we neared the shrub, a beautiful aroma filled the surrounding air, just as my honey smelled and tasted. Oh what a wonderful shrub! for its great round leaves, I did not perceive its flower, but a stem about 6 inches long, covered thick with white flowers, etc. I was delighted in the highest degree over such perfume, so powerful, so very delightful. There must my honey come from, and no other plant. I was sure of it, and know it is so. This shrub is called here the sea-grape, and acres of the same stand on the sea-shore, near salt water. It is very easy to transplant, and spreads itself rapidly and very wide, but doesn't reach up the creek to my place; but by next year I hope I shall have planted both shores of my creek with it, as the tide water reaches up here. And so I plant cocoanut-trees, and have 250 nuts ordered from Panama. The bloom of these beautiful shrubs is in May here; and so is the saw-palmetto. What a beautiful perfume even this great blossom had, so powerful!

No Northern man has any idea of the expression, "garden of Eden," and not without a reason; but the garden must be cultivated. It is in a wild grandeur, beautiful through and through. I broke a few blossoms of the sea-grape and took to the hotel, and told them my story, and all exclaimed, "Oh! that smells already like sweet honey."

But now comes a big drawback; and this is, that the "cow-boys" burn up the whole woods and country, to keep vegetation down, to kill snakes, insects, etc., and to start the grass. This destroys the fountains of the precious honey. But now, my dear sir, you must not think hard or low of these men by the name of *cow-boys;* for they are gentlemen of clear water, some worth from one-fourth to one-half a million of dollars; but they are men used to exposure; men of learning, who found, by camping in the swamps, their health, and cure for broken-down constitutions. They are merchants of New York, and officers of the U. S. army, who, after the Florida War, chose South Florida for their home; and now these gentlemen, and others of influence, promise me not to burn any more for some miles in my neighborhood, and their word is as good as gold. We have no court, no lawyer, no thief, no bad man in this county. If the North had many thousand of these men it would be better for them! I am the only settler in this district. My neighbors are alligators, snakes, mosquitos, and sand-flies. The alligators pay me every day a visit when I go to the creek, but keep at a respectful distance. The snakes are quite plentiful, but not hurtful, and keep out of my way. The rattlesnake and moccasin I have not seen yet, and the other snakes are innocent and useful, because they exterminate the poisonous snakes. I killed to-day a yellow snake, and was afterward sorry I had done so. When I examined her mouth she had no fangs nor poison. Three to four big blacksnakes play among my planted trees before the bee-hives, and my children go barefooted, and water the trees. I do not intend to kill them; they are of great benefit to us. They are 5 to 6 ft. long.

Now, in short, the whole vegetation seems to me to breathe and produce peace, sweetness, and honey, except the pitch pine and cypress, and may be both of *them* are useful for the bees. When I drove nails into a pitch pine, before my tent, a thick sap sprang out and ran down the tree. "Oh! honey! honey!"

cried my children, who came with their fingers, and licking it up. Both found, to their astonishment, the supposed honey to be of a bitter taste, like turpentine, and I had to use strong measures to keep my little 3-year-old girl away from licking it, for I feared she might be sick, as I myself had tasted the sap, and felt pains of colic after it.

The whole region, from Clearwater down Manatee River, Peace Creek, Charlotte Harbor, Caloosahatchee River, in the Hamock and swamp lands near the coast, are the best fields for the bee-keeper; besides, I do not hear or know any who bother the bees.

Two nests of two bald-eagles are near me on my way to Punta Rassa, and the sand-crane, crows, and the different sorts of water-fowls and sea-birds, with the gaudiest plumage, and no bee-eaters. The mosquito-hawks are not bad near the apiary, but *are* bad near the sea-shore and great water-courses, and may take many of my pets away when in search of nectar. The ants trouble a little when the bees are not placed on a platform 1½ or 2 feet high, which I did. Besides, when so located, no toad can reach them. This precaution, Mr. Hendrick, of Cedar Key, gave me, and I acted accordingly, and brought 700 feet of lumber over from Fort Myers for the purpose. The transport of this lumber cost me over $20.00.

On Estero Bay, River, and Creek, are thousands of acres of mangrove, mixed with cottonwood, sea-grape, cabbage and saw palmetto, mastics, many kinds of cactus, live-oak, etc. But the disadvantages of great wide water-courses is the mosquitos, sand-flies, and mosquito-hawks; and if the apiary is not watched, the bear will soon find them out and partake of their honey.

The moving of my goods and bees from Punta Rassa to this place took two weeks, and cost me over $60.00, 16 miles distance; besides I was over 8 hours naked in water, amid the alligators and saw-fishes, to shove the boat with my feet over sand and oyster banks, over tree-trunks and stems, in which the boat was caught, and I entered my possession alone, with my bees in the dress of Adam, after 8 hours of hard labor, my whole back side from head to heel burned and blistered from the rays of the sun. Next day I had a heavy attack of chill from the exposure.

We are all hearty and healthy now, and thank the Lord for it! The thermometer raised to 90 and 95°, and the cooling sea-breeze enables me to do hard work without inconvenience, except on very calm days we feel a little exhausted, but not much. The nights are all cool; and after midnight you draw the cover closer. Mosquitos and sand-flies are troublesome on calm days and early mornings, and late evenings in the night. We have no trouble to sleep well, as my good tent shuts them out.

FLORIDA HONEY.

I hear that a New York man, Mr. Thurber, and a Cincinnati man, visited Florida to look after the resources of honey here, and they said the Florida honey is the best in the world, and I believe it!

AN INSANE BEE-MAN.

A brother bee-keeper was here (I do not know his name) with Langstroth hives, extractor, etc., who failed. Mosquito-hawks destroyed his bees, and he became insane. Others say he was crazy before he went further South on the sea-shore. They carried him to Key West, and brought him to an asylum, where he will now be kept. His few things, the bears afterward destroyed in the apiary. I shall try to find out his name. G. Damkohler.

Punta Rassa, Monroe Co., Fla.

Friend D., I am afraid you are a little hasty in deciding so soon to call your place the "Garden of Eden Apiary." If I am not mistaken, yours is one of the enthusiastic temperaments that are often cast down, discouraged, and disappointed. I confess that I like the prospect you have pictured before you in your wild home; but do you fully realize how much you have to do to make this wilderness a home fit for your wife and children? A great many have written with much enthusiasm of Florida, but very few have ever yet reported a realization of these bright anticipations. Are you sure you and your children won't get lazy, without any frost and snow? and will they get an education, with the zeal and enthusiasm they might have were they battling with our Northern winters?

MRS. AXTELL TELLS US MORE ABOUT BEES IN THE HONEY-HOUSE.

ALSO SOME OTHER MATTERS.

As you asked me to come again, I will do so, and reply to questions in regard to bees in my honey-house. The two honey-houses at home, bees could not get out of and in to, unless carried in or brushed out; and the one at our Timber Apiary bothered us some when honey harvest closed, as a few bees did get in and out, which would cause bees to hang around the house. It seemed impossible to fasten them all out, as it was not a plastered house; the other two were plastered. There was no pollen in any of the houses, to my knowledge; no brood-combs; probably a few cells in the surplus frames of honey, but I doubt if there was as much as a whole section full in all three houses. There might have been more, as the two houses at home were both nearly solid with comb honey, and the one at the other apiary held only the honey for a few days at a time, until removed home.

In two of the houses there were large sheets of brood in all stages, and considerable capped brood, some nearly ready to hatch; but I don't remember whether any hatched out, but think there was, as the comb looked dark in the center, as it does after brood has hatched. We would leave the wooden doors open as long as we could without attracting robbers from the outside, in hopes that they would come to the screen doors. A few would come, but we could not get them all out, as more would slip in each time we went in, if we had been carrying in honey; but at night they would all leave and go home to their hives. At the close of the harvest, perhaps a teacupful hung around the door a few evenings, and I gave them to a queenless colony that I had set near one door.

STRAINING EXTRACTED HONEY.

I see you and others seem to think extracted honey needs to be run through a strainer. I can't see any use of the strainer at *all*. Impurities immediately rise to the top, and can be skimmed off. The barrel should be skimmed once or twice a day. Our honey is perfectly clear — every speck rises, and it seems to me to be a great deal less work than to bother with a strainer.

Our hive is large, and I don't see how bees could suffer for want of upward ventilation, as we take out the surplus and set the bees in center of hive, and covered with 2 thicknesses of coarse cotton cloth and thin boards on sides of brood-frames, then filled all up with dry chaff, oats, or buckwheat. The capacity of hive is 65 to 70 lbs. of honey, besides the brood-nest. There is opportunity to put a hole through the end of roof (which is slanting), and cover with wire cloth; but we thought they wintered better without.

ANOTHER FOUNDATION PRESS.

The plates for pressing foundation were made by a man living in Desmoines, Iowa, but I can't recall his name. They are about 11x12 inches. They were made to lay the upper one down on each sheet that was pressed, and to be used in a cider-mill press, or something similar; but we soon cracked little pieces off the ends, so Mr. Axtell fitted them solid in thick boards, and hinged them together, and they now do fine work, though I suppose it is slower than with the presses. He spent some time at first, trying to make it work well, by cutting the cells in the plates deeper, etc., so he determined, after putting so much work on it, to *make* it work well. We sheet the wax first. My sheeters are of wood, size of pressing-plates, which I like to have soaked in water a week before using, as they are then so full of water that the wax does not stick. We put on our wash-boiler, and pour in two pails of water, then about 10 or 15 lbs. of wax, and let it melt slowly. We put more wax in a kettle, with a pint or more of water, and melt. Then we lay two sticks of wood down by my lounge, and the girls set the boiler on them. Further to my right hand I have the dish-pan full of warm water (rather warmer than milk), in which my wood sheets are soaking, the face of which is smooth, with a handle attached to it like a mason's hawk, or the tool he holds his mortar on. When all is ready I dip one sheeter in the wax, one side of face first, then the middle, then the other side; if I dip it in flat down, there would be air bubbles all over the sheet. When the face is all covered with wax, I hold it up till done dripping, always taking care to let the wax run off the side that was in last; then change it to left hand, and with right lift out the other sheeter from the pan of water. While the water is dripping I drop the sheeter with wax on in the water, then dip the sheeter just taken out, and change to left hand, to hold while the right picks up the empty sheeter in the water, and so on. Rettie presses the sheeter down in the water, and the wax lets loose of sheeter — when she lifts it up; then she picks out the sheet, and pulls off the little edges around the sides, and lays the sheets in piles. When the wax gets cold we pour in two qts. of water, and more wax as needed, until we get the large boiler full of water and wax all sheeted off. I could not handle the panes of glass for sheeters; and then when they were put in wax endwise the dregs in the bottom would sometimes adhere; whereby, if only laid flat on top, all the wax was used up, and that boiler of water exchanged for clean. I think the water makes the wax whiter, as dark wax will be light by that process. I have no dark foundation. As it is rather hard on me to do, I sheet only the one boiler full of water in a day, of 2 or 3 hours. The water, when poured out, looks quite yellow.

HOW SOON ARE THE BEES CLEAR OVER THE SPRING TROUBLES?

May 7.—Bees are doing their best, as the fruit-trees are in bloom now. It has taken very careful nursing this spring, to bring them through. I think I have seen it in print, that bees recover from the dysentery when they get natural pollen; but ours did not entirely. It was only day before yesterday I noticed a fresh spot on the hive, and the sidewalks were spotted not many days ago, two weeks or more after getting pollen. Those wintered in cellar were the worst in this respect; but we lost more of those wintered out of doors. This was why they clogged the entrances to hives so badly — not the ice and snow, as we first supposed. Often we found a patent pail full of dead bees in the hives, or nearly so; of those wintered out of doors, sometimes just a few alive, and perhaps going out and in from top of hive, if there was any possible way to get out.

We had hired a young man to keep the snow from entrances, so we did not go over to care for them so soon as we would have done otherwise; but when we did go over, there were about 35 or 40 clogged up thus. We think it was the honey, though it was sealed up as well as usual last fall. The hives, many of them, seemed to have large circles of brood before they died. As it had not all hatched out, many that were short of honey seemed to have eaten more than the live bees, as all had plenty of honey last fall.

I don't think we ever had so much brood in the hives for the amount of bees, and we have fed no flour either. We now prefer to keep the bees as quiet as they can be kept early in the spring, and we half believe flour feeding an injury, instead of a benefit. But give them plenty of honey in combs from this on, until white clover, by setting the frames outside of division-board, and letting them carry the honey in, and giving the bees only so many combs as they can cover, and fill with brood.

PREVENTION OF SWARMING BY ABUNDANT ROOM AND VENTILATION.

Last summer, when the bees began to be strong, and commence filling up with honey, I thought I would give plenty of ventilation, and see if I could not in that way prevent swarming; so I took off one side of the hive, and just leaned it up against the hive, to shed the water when it rained. Sometimes it would be the back or front; they would go though a heavy rain, and I could see no difference; but when they got ready to swarm, they swarmed all the same, only made it harder to find the queen, as they could get out so fast. I noticed they would store most of their honey on the opposite side of the open end of the hive. In one or more hives the brood was left exposed on the open side, which they generally kept covered two or three bees deep.

SARAH J. W. AXTELL.

Roseville, Ill., April 26, 1883.

Thanks again, Mrs. A., for the important points you bring out. Your plan of making wax sheets will no doubt make nice ones; but it would be much slower than the way we do—four large sheets at one dipping, while you make only one.—In regard to spring troubles: I believe they have lasted this year much longer in almost all localities. We have had several reports of bees dying, or swarming out, clear up to the first of June.—I am much interested in your experiment on ventilation. You know it has been recently suggested, that swarms that go off without clustering are from hives with large entrances. Did you have any such experience with these hives with such abundant openings? I, too, have noticed that where no division-boards were used, the bees would cover the exposed comb, especially when it came to be used for brood with a dense covering of bees, and that they stored the honey more over against the protected side. Our experiments in the house apiary brought this out clearly. For comb honey, we want rather close hives, and not too much ventilation; and I feel pretty sure they should be well protected from the great heat of the sun in the hot summer months.

WHY NEW SWARMS GO OFF.

SOME GOOD THOUGHTS FROM FRIEND TRAIN.

YES, swarms do sometimes come out and go off without clustering. My answer to the question asked by "Old Fogy," p. 242, May GLEANINGS, is as above. I have several times had the bees get the emigrating fever so badly that they would often do so. This has always happened when honey was scarce in my immediate vicinity, and a good flow at some distance. I am situated 5 or 6 miles from heavy basswood timber; and when basswood blooms freely, and there is a dearth of other bloom, we always have a regular fight to keep any bees at home; and during such times they quite frequently come out and leave without clustering. And with this state of things they do it so often that I dare not, as usual, leave them to cluster under the eye of a small boy or woman, but am on hand with my big looking-glass and my double-barreled shotgun, well loaded, shot and all; for when they make up their minds to go, they lose no time "fooling around," but rise right up over the top of the maple grove in which they sit, out of reach of blank cartridges, and away they go. So let Old Fogy take notice, that at least one man "has seen bees come right of the parent hive, and go off without clustering."

CHICKENS IN THE BEE-YARD.

F. D. Clarke asks about keeping chickens in a bee-yard. I can only say I have kept chickens in my bee-yard every year for over 15 years, and have never had them eat any bees, and the bees seldom disturb them; and the chickens are, we think, a great help in subduing the moth. They are very busy, early and late, eating not only the worms but the moth also. But we coop the mother-hen, and remove the chicks as soon as they will do to wean, and plan to have a young brood to take their place. We now have a brood of 22 chicks just installed.

BEE-CELLARS, AND SUB-EARTH VENTILATION.

Since I am writing, allow a few words about bee-cellars, etc. I note your remarks, page 244, May No., relative to sub-earth ventilation. That is all right, if you do not have too many bees for the size of the cellar; but if you have more than one swarm to every 20 feet of cellar space, you must let in air colder than the earth. What we really want is a sub-earth pipe, *and* a pipe without the "*sub;*" so that we can let in cold or modified air at pleasure. I have my cellar so arranged that I can bring all the air that enters, through 16 feet of narrow air-chamber filled full of ice; so when the temperature outside gets above 40° we resort to the ice-air chamber. In a few instances this last winter, the thermometer in the cellar went down to 40°, the first time in many years; and at those times we used a kettle of coals from the stove, which we use to create a draft out of the cellar. Said stove always has a good supply of live coals whenever the bees are in cellar, day or night. We have no trouble in keeping the cellar warm enough; and with proper care we can keep the temperature nearly steady at about 45°. It should never be lower, for the best results. I have become so confident in my cellar, and ability to regulate it, that I would not give one per cent to have my wintering insured, if the bees are in a normal condition in the fall; and I do not care how much pollen they have either. I do not mean to boast; be it far from me; but I have wintered bees in cellar 15 successive winters, and have not lost 5 per cent in any winter of the 15, and for the last 5 winters I have not lost one per cent; and all the losses I have had have resulted from some abnormal state of the bees, or from carelessness on my part. And then it makes me feel so bad to read of heavy losses, that I feel like talking strongly. And I am not satisfied with having them come out merely alive, but I want them perfect. All of my 131 colonies came out perfect this spring, save 2, and they only soiled the front of their hives a little near the entrance; their combs were clean. All the rest scarcely fouled a thing, even in their first flight. The two exceptions referred to were caused by my own carelessness, and that is usually the trouble, if we have any losses; for a *nuclei* or *queenless* colony will winter, if the temperature is kept right all the time. Keep the conditions all right in cellar wintering, and I think a good healthy swarm of bees are as sure to winter as a well-fed healthy steer.

HYBRIDS FROM BLACK QUEENS AND ITALIAN DRONES.

I just happened to think that the strain of bees may have had some influence in my case; but I guess not (my bees, it is true, breed late and early, and are well acclimated), unless it be the small admixture of Italian blood. And, by the way, I am so well pleased with this cross (Italian drones and brown queens), that I have sent for a dozen Italian queens to raise drones from, and I mean to decapitate all other drones for one year, and watch the result. My present hybrids certainly differ materially from the hybrids that others write about, and that I see at other apiaries. H. V. TRAIN.

Mauston, Wis., May 17, 1883.

Thank you, friend Train, for the suggestion that the cause of bees decamping without clustering might be due to the fact that they had discovered a better hunting-ground, and one that would save many long, laborious flights. If bees do really sometimes fly six or eight miles, I can hardly think they really like the fun of carrying a heavy load that far. Well, it would hardly be beyond their instinct to figure out, as it were, the advantage to be gained by starting a new "ranch," right in the midst or on the border of these more desirable locations. And here opens a new field for us to investigate. Where wild swarms do most congregate in the woods, there is where the bee-keeper should aim to locate. The swarm I alluded to, which the women-folks saw go off, went right over to a tract where both clover and basswood abounded in great profusion.—Small chickens would doubtless do very well; but the reports found elsewhere of grown fowls learning to eat bees, ought to induce us to look carefully into the matter of confining them near the hives. Our poultry have so large a range that they seldom go near the bee-hives.—In regard to sub-earth, friend T., I believe it is generally held that air, brought from a sufficient distance below the surface of the earth, will always be of the right temperature, neither too hot nor too cold. If the bees in the cellar got too warm where there was a sub-earth pipe, I presume the deduction would be that the pipe was not large enough, or that the air was not made to pass through it with sufficient rapidity. I should very much like to try my hand at making a sub-earth bee-cellar to my liking. —We find very nice hybrid bees, with black queen-mothers, in the swarms that our farmers bring in to us; and since you mention it, it occurs to me now that the bees are often quite gentle, as well as good workers.

MARKETING EXTRACTED HONEY.

FRIEND D. A. JONES TALKS TO US ABOUT IT.

FRIEND JONES mails us the following, clipped from some paper, he doesn't say what, and with the remark: "You can publish this, if you wish." To be sure, we "wish," old friend, so here goes:—

This is a subject in which considerable more interest should be taken, as it has much to do with success or failure in apiculture. If, after the apiarist has struggled hard throughout the summer to secure a large crop of honey, he attempts to place it on the market, and finds the price so low and sales so slow, that no profits are to be realized, and very poor remuneration is received for his labor, he loses interest in the business, and looks around for some more profitable occupation — perhaps leaving the pursuit in disgust. If, on the other hand, he sells his crop rapidly, and at good figures, realizing handsome profits, he becomes exceedingly enthusiastic, and not only extends *his own* business, but others seeing his success, also embark in the fascinating pursuit, and thus our numbers are increased.

The great evil in connection with the marketing of honey is the manner in which the small, uneducated bee-keeper places his crop before the public. Not knowing its value, he places it on the market in such unsalable shape, and in the hands of dealers whose knowledge of the trade and its requirements are as limited as their own, and who will not pay more than two-thirds value for it, besides thinking it a hardship to have to buy it at any price.

A change is, however, coming over matters, and instead of our having to seek a market, we are sought after, and are offered far more at wholesale than we formerly received at retail. Why this great change?

It is being brought about by the plan of exhibiting at fairs and exhibitions, hundreds, thousands, and tens of thousands of pounds of honey, in such attractive shapes that visitors are amazed at the mountains of honey; this department becomes one of the leading attractions of the exhibition, and the honey is largely purchased by the visitors, and taken home as one of the "big" features.

No one would think of taking honey to an exhibition to compete for prizes, in milk-pans, buckets, etc.; then why take it to market in any other than the best shape? There the competition is even greater; for besides having to compete against other honey, it has to compete against every other imaginable mixture that man can devise, many of them unhealthful, poisonous mixtures, composed largely of glucose, and better adapted to sap vigor and life from the human frame, and fill our cemeteries with premature graves, rather than be a luxury on our tables. Now, if this vile stuff were not placed on the market in a more attractive form, would it take the place of honey? Are our bee-keepers going to slumber? Are they less intelligent? Can they not devise as attractive packages? Can they not devise as attractive labels? Can they not devise packages as suitable in size, and as well adapted to the requirements of the trade? Can they not devise a plan of placing it on the shelves of the retailer, and on their counters, so that it will appear to better advantage than any other goods in the store? The goods that present the finest appearance on the shelves, and are the most pleasing to the eye, are the ones which will sell the most rapidly. Every merchant wants his place of business to outshine that of his neighbor, and the brighter and more attractive his display, the better he will be able to obtain his end.

By our putting up honey in packages, ranging as follows: 2 oz., 4 oz., 8 oz., 1 pound, 2½ pounds, and 5 pounds, they come within the reach of all; the smaller sizers are purchased by children, instead of confectionery, and these advertise the larger, increasing their sale tenfold.

A uniform size of package is also very desirable; after placing the honey in tins, label them, inclose each in a wrapper to prevent the labels from chafing or being injured in appearance, and then place them in neat cases ready for shipment in the following sizes:—

12	tins	5	pounds	makes	a	case	of	60	lbs.	1 dozen.
24	"	2½	"	"	"	"	"	60	lbs.	2 dozen.
60	"	1	"	"	"	"	"	60	lbs.	5 dozen.
120	"	½	"	"	"	"	"	60	lbs.	10 dozen.
240	"	¼	"	"	"	"	"	60	lbs.	20 dozen.
480	"	⅛	"	"	"	"	"	60	lbs.	40 dozen.

Packages of half the above quantities could be handled advantageously.

The wholesale merchant may then purchase as many cases and half-cases as he may require, and his travelers will carry samples, and dispose of it in the same manner they do all other canned goods, to the retailer. In this way tons of honey are disposed of to merchants in out-of-the-way places, which we would not otherwise reach. Why is honey not found as are all other canned goods, in our mining districts, in the camps of our soldiers, in the new States and Territories, in the new towns along our newly constructed railroads, and in thousands of other places in America, where it could be sold with profit to both producer and consumer? When will we learn to supply our own market with our own products, instead of allowing foreign goods to take their place, and forcing us to seek a foreign market with smaller profits?

If this system be properly carried out, honey enough can not be raised in America to supply the demand.

NEW HAMPSHIRE AND FLORIDA CONTRASTED.

BY OUR OLD FRIEND HENRY DANIELS.

I MOVED from New Hampshire to Amelia Island, Fla., last November, bringing with me a small swarm of bees — a swarm that could not possibly winter north. The express charges were 40 cts. to Boston; came as baggage the rest of the way. It was a small light hive, only three combs, a pint of bees, and a *very* few pounds of honey. From Boston it came by ocean steamer. It was all together ten days on the road. In Fernandina, by shaking the box, I could hear a feeble hum from a seemingly solitary bee. I concluded it must be the queen alive, and had the curiosity to look; surprising! there was not a dozen dead bees in the lot, but some very tired ones. The hive was placed Nov. 16th in the shade of an orange-tree; and after developments were watched with interest.

The next day they took up with scouting over the island; found the weather all right, but not much honey until January, when the peaches, plums, oranges, etc., began blossoming, when the honey commenced to flow, and so has continued to the present. Well, what of the bees? Finding nature so free, so bountiful, so continual a succession of the nectar of life, are they following in the footsteps, so to speak, of the native humanity — becoming lazy, slothful, dirty, don't care what, "enough is as good as a feast," kind of a style? Not at all. It has been good weather, and a hum, hum, hum, work, work, work, right along. On the 10th of January there was more sealed brood in the hive than live bees in the swarm. To-day, the 10th of May, the produce of that swarm *fill* four ten-frame hives — improve each shining hour, not gathering honey all the day to eat it up at night, but storing in big 8 x 16 handsome white slabs on comb fdn. The comb is white, the honey between golden and silver; a peculiar, but very nice flavor and taste. If they continue to improve in geometrical ratio, I shall have 64 fine swarms by November to feel big about — some contrast to my disheartening time with bees in New Hampshire last year. The 1st of May, 1882, I had 51 live fair swarms of bees. I took the best care of them, made preparations early, buying quantities of fdn., sections, hive material, etc.; and for result, the 1st of Oct. not one new swarm; no honey, and dwindled to 30 odd swarms of bees. Misery loves company, doesn't it? Every dog has his day, doesn't he? When you come to Florida, come and see me. HENRY DANIELS.

Fernandina, Fla., May 8, 1883.

ITEMS OF EXPERIENCE FROM FRIEND J. A. GREEN.

INCLUDING SEVERAL ITEMS OF IMPORTANCE.

IN making my spring report, as I promised in my wintering report, given in May GLEANINGS, I have little change to make in the results given then. I have had some slight losses since then. Several of the swarms used in queen-rearing last fall have dwindled somewhat, and others have become queenless, so that I have united down to 140 to begin the season with.

A DRAFT THROUGH THE HIVE NOT DESIRABLE.

The swarms that had large entrances at each end of the hive have dwindled enough to convince me that a strong draft through the hive is not desirable. On the other hand, one of the very strongest swarms I have was wintered in a large chaff hive, with 12 frames below and 5 above, only partially covered with a piece of duck.

TENEMENT HIVES.

I am compelled to admit, that the swarms in tenement hives used considerably less honey than those in either chaff or single-walled hives. I did not weigh the stores allowed them in the fall, so I can not tell exactly how much less they used than the others, but should estimate it at 5 lbs. less than those in single-walled hives. There was not so much difference between them and the chaff hives, but still a very noticeable one. The tenement hive, though, is so inconvenient to handle, that, unless they prove superior for honey production (which I have not had opportunity to test fairly), I will not make any more of them.

POROUS COVERING A DETRIMENT DURING THE SPRING MONTHS.

While I do not think it makes much difference whether enameled cloth or a porous covering is used during the winter, I believe very strongly that no porous covering should be used over bees during the spring months. In the spring, bees need all the moisture generated in the hive for the raising of brood, and any current of air, no matter how gentle, which carries off this moisture, and, of course, with it a large amount of heat, is injurious.

ENAMELED SHEETS; GOOD POINTS OF.

If moisture condenses on the under surface of the enameled cloth during rainy weather, all the better. I should be glad if such were always the case. Bees need large quantities of water when rearing brood; and if the weather is such that they can not fly out without it, they should be supplied inside the hive, or they will suffer.

WATER FOR BEES.

Last week, on a warm sunshiny day, when the bees flew freely and gathered honey, with also, doubtless, a full supply of water, was followed by a rainy day, the rain falling steadily nearly all day. During the afternoon I observed that the bees were getting restless; and about 4 o'clock many swarms had a row of bees along the entrance, sucking up the moisture from the soaked earth, while some swarms, less wise, flew out into the rain in search of water. A saturated sponge, or a little water poured into the hive, soon quieted them, showing that all they wished was to renew their supply of water, which had become exhausted in 18 hours or less. I removed the last of your wooden mats yesterday, and I don't think I shall use them any more, unless for experiments in wintering.

SWARMS IN THE HONEY-HOUSE.

I was much interested in Mrs. Axtell's account of the swarms of bees that formed in the honey-houses, and I have had some experience in that line myself. Two years ago I stored my comb honey in a small house-apiary in which were two swarms of bees. I allowed these bees free access to the interior, where about 600 lbs. of honey in sections was stored upon shelves, in order that they might empty all unsealed and broken cells. By the way, this is a plan of which I have never seen any mention, though it may not be new to some. In this case it worked excellently, all unsealed honey being taken out by the bees, thus preventing all drip when the honey was carried to market. There was no trouble about the bees uncapping the honey, although there might have been if their hives had not been full of honey. About the last of July I noticed a small cluster of bees in the upper part of the room. Whether these bees came from the swarms already there, or were brought in with honey, I can not state. On examining them I found that they had removed the honey from two or three sections, and filled them with brood. The honey removed had been stored in several small combs which they had built overhead, and this honey was, as Mrs. Axtell has remarked, exceedingly thick and nice — much better than that in the sections. Now, the interesting point is, as you have said, Did these bees fly out of doors while they raised their brood, or did they rear the brood without pollen? I am certain that there was no way for them to get in and out except by going through the two large colonies, which is improbable, unless they watched their chance and dodged in and out of the door as it was opened and shut, which is still more improbable. I am positive, though, that they raised brood with little or no pollen, as I particularly remarked that the larvæ seemed more delicate than usual; in fact, almost transparent; and when they were capped over, which I think, though I am not certain, was after a longer period than usual, the caps, instead of being of the usual yellowish color, observable even on new combs, were as white as those on the finest comb honey. It would have been interesting to make careful experiments on them, but I had not time then, and the swarm dwindled away and soon disappeared.

WHAT A POUND OF BEES MAY DO IN A YOUNG LADY'S HANDS.

Mr. House's advice to friend Rice, in Blasted Hopes, induces me to "have my say" in regard to what a pound of bees may do. July 8, 1882, I sold a pound of bees and queen to a young lady bee-keeper of Ottawa. They were supplied with two frames of brood, but received no other help. Before winter they had built up into a good swarm, and produced 17 lbs. of honey in sections; and now, to crown all, have wintered safely.

PUTTING LABELS ON TIN.

I suppose many honey-producers have felt the need of a reliable method of making small labels stick to a smooth tin surface. The label sticks all right as long as it is moist; but as soon as it becomes perfectly dry, the adhesion vanishes. After some futile attempts to roughen the surface of the tin with chemicals, I decided that what was needed was something that would prevent the adhesive substance from becoming perfectly dry. I first used glycerine for this purpose, and found it an improvement; but soon discarded it for honey. Honey will never dry up enough to peel off from tin; and as it is sticky in itself, it does not injure the adhesiveness of any substance with which it is mixed. For putting on labels, I use and prefer a solution of dextrine to which is added about ¼ its volume of honey. For gummed labels, use a mixture of honey and water. Probably cheap molasses would be better than honey; but I have used honey, because I preferred to "encourage home industry;" and besides, I did not have the molasses. J. A. GREEN.

Dayton, LaSalle Co., Ill., May 15, 1883.

CLIPPING QUEENS' WINGS, ETC.

DO WE REALLY WANT THEM CLIPPED?

LAST Sunday one of my finest colonies being crowded, I examined to see if I might go to church. The first comb taken out disclosed a capped queen-cell. A dozen more were found, and all taken out with four solid sheets of brood and adhering bees. The swarm issued while I was at work. I took out every queen-cell and put in new combs, intending to bring the swarm back. But they came back; and many being on the ground, I looked for, and found the queen—a fine Italian. I let her run into the hive, and found it was one of the few I clipped. She appeared to be all right. To-day, looking into the hive, five days later, I find a full set of cells, some of them capped, and some only half built out. I counted 14. As the hive was full of bees, and ten frames at that, no swarm could have issued. She was not displaced for inefficiency, for she was one of the best. It was evident that she laid no eggs since Sunday, for there is no young brood.

This is the second queen I have lost this spring from clipping. I clip no more. In the other case a monstrous swarm issued and alighted, and in twenty minutes returned to the parent hive. All cells had been taken out. Five days later, new cells were found in abundance, and no queen. The colony was depleted, as before.

Locust bloom is more abundant than I ever knew before, and a larger amount of nectar is secreted. The trees are masses of white flowers now. This is regarded here as a harbinger of a fruitful year, and surely there never was such promise of fruit of all kinds.

MAKING NEW SWARMS STRONG, SO AS TO GET BOX HONEY.

I have practiced very successfully the plan mentioned by Mr. W. Z. Hutchinson, of at once strengthening new swarms, and making them *boom right off*, by adding brood largely. My aim is not to increase, because of my large fruit business and farming operations. J. W. PORTER.

Charlottesville, Va., May, 1883.

I agree with you in regard to clipping queens' wings, friend P.; or, rather, *not* clipping them, when we have control of the apiary so as to prevent swarming, as we have here. When you are working for box honey, however, and no increase, it is a little different. Suppose your swarm had gone out when you were at church, for instance. I know there are difficulties both ways, and I presume that, while some will settle down that they want every laying queen clipped, others will be equally sure they don't want any clipped queens in their apiaries.—Giving frames of brood to new colonies, so as to get large crops of box honey, will work tiptop if you can keep them from getting the swarming mania. But when they get this mania, giving brood will simply foster the swarming impulse.

SWARMING WITHOUT CLUSTERING.

FRIEND PETERS GIVES US A LITTLE TALK ABOUT IT.

IN reply to the position assumed by "Old Fogy," in your May issue, page 242, I have to say that he is not more positive in his belief about bees *always* clustering when they swarm, than I was up to 1860. I had then kept bees 35 years, and often asserted the fact that no noise of bells or drums ever arrested a swarm in its flight, or induced bees to cluster, under any circumstances, and ridiculed the idea of bees absconding without taking time to cluster, to find a future home.

With this conviction riveted in my mind, I one day saw the very same thing which had often been told me, but never, until then, proven. It happened thus: I had a colony, which had clustered some days preparatory to swarming. One day it swarmed; but the swarm returned without clustering. That night we had a heavy rainfall succeeded by cold weather, which lasted five or six days. On the first warm day, said colony swarmed. I was on hand, and followed the swarm through the orchard, expecting it to cluster. The bees continued their course beyond the orchard; and instead of mounting high in the air, and flying rapidly, they came low down, just above my head, and crossed the field slowly until they came to a dead ash within the plantation, half a mile from the house, and went into a hole in the tree. The next day we cut the tree down, hived the bees, and they did well. Three years after that date I had a swarm come out, rise high, and go off rapidly. I followed them on horseback to the woods, where they entered an old deadening; and when I was about to abandon the chase, I noticed they circled about a sassafras, and I waited and saw they housed themselves in it. I gave the tree away.

On a third occasion I followed a small swarm just out of the hive to the woods, three-fourths of a mile, when they clustered about five minutes, from having dirt thrown among them, I suppose; but before I could have a hive brought from the house they were off again, and went about a quarter of a mile to a tree.

Now, Mr. Editor, I have been looked on as a bee-man for 50 years, and these three instances are all that I ever knew during that period. In fact, so very rare is the occurrence of bees absconding without clustering, that I censure no man for disbelieving it entirely. Without ocular demonstration, I never should have believed it myself. A thousand negatives will not disprove one positive.

HONEY VINEGAR.

One question I wish to put is for your correspondent A. L. Davidson to answer. He says in May No., page 243, "In making honey vinegar, never allow what is called mother to accumulate." That is the very point. How does he prevent the mother accumulating? I made 40 gallons of most excellent vinegar last year, but I doubt whether we ever got the benefit of more than two gallons. It all went to mother. While I think honey vinegar a most excellent and healthful article, I do agree with Mrs. Harrison, that there is a taste, or, as some would put it, a *twang* about it, that can not be disguised by any effort of mine. GEO. B. PETERS.

Council Bend, Ark., May 24, 1883.

FRIEND GOOD, AND HIS NEW HOME IN TENNESSEE.

ALSO A FEW WORDS ABOUT THE SOUTH IN GENERAL.

I HAVE just returned from my second trip to Tennessee. I purchased a small piece of land, 58 acres, near Tullahoma, where I expect to move next fall. I also purchased a lot of bees there. My brother, who has had considerable experience with bees, is going to move there at once to take charge of the bees. We are thinking of starting two apiaries there — one Italian and one Holy-Land. I will send the queens from here, and have the bees all Holy-Lands this summer.

I have had a great many letters and cards, asking about the South, and nearly every one asks the question, "Do you think a Northern man will be safe in the South?" To which I answer, yes, just as safe as he is in the North. I never met with as kind and generous people as I did in the South. Let me relate one instance.

While in Alabama I stayed three nights and two days with a man who was an officer in the Confederate army, and was taken prisoner and kept two years at Indianapolis. While with him, he went with me through the neighborhood, and showed me the country, and treated me as if I were a brother of his. When I wanted to pay him for his kindness, he says, "Do you think we are mean enough to charge you for two days' board, while you had me in your State, several years ago, and kept me two years, and did not charge me a cent?" The people in the South are anxious to have the Northern men come and help build up the country. Good farming land can be bought for from $6.00 to $30.00 per acre; and for farming and stock-raising, I think it would be preferable to the North. I. R. GOOD.

Nappanee, Ind., May 5, 1883.

ARKANSAS NOTES.

A HOME-MADE BEE-KEEPER, AND HOW HE MANAGES.

I HAVE been instructed as well as amused by the reports from the brethren. But I have not seen a single word from our State, and this makes me feel like saying something on the subject of our honey resources.

I used to keep bees in Ohio (your adjoining county, Wayne), but the cold winter of 1880-81 killed them and induced me to do as friend Good has done — take up my abode in the sunny South. I was unable to find any bees for sale until this spring, as the business is very much neglected here. I bought 11 swarms of black bees about the first of March, for $2.50 per swarm. They have increased to 23 swarms. The first swarm came out April 17th. I put them in a hive long enough to hold 18 frames, 10x12½ inside measure. I confined them to 9 frames at first, with a division-board; and when they got them pretty well filled I took out the division-board and filled the hive with empty frames, alternating them with the full ones. On the 19th of May I extracted 24 lbs. of beautiful white honey from 9 of the combs, the rest of them being nearly full of brood. The bees are all doing very well. I have them all transferred into frame hives. I have taken over 200 lbs. of honey, and sold a half-interest in the bees for $50.00, so you see I am doing well enough. The swarms were all considerate enough to cluster on a small tree in the yard, and stay there till I came home to hive them (I work 10 hours a day at the stave factory, and tend the bees between times). I expect to devote my entire time to bees next year. I believe this is an excellent place for them. There are plenty of wild bees in the woods, and it is no trouble to winter them here.

SUB-EARTH (?) VENTILATION.

Two of the swarms I bought were wintered sitting on the ground, the lower ends of the combs being in actual contact with the earth. The pigs got into the inclosure where they were kept, and rooted the earth up around the hives, so that the bees had to tunnel to get out. One of these two was the first to swarm. Some of the others were in very poor hives; the bees could get out at the top as well as at the bottom. The people here keep bees only in box hives, and rob them in May by taking off the top of the hive, and digging out what they can. My hives and extractor and smoker and foundation are great curiosities here. My extractor I made myself in half a day, at an expense of 25 cts. for wire, and 50 cts. for honey-gate, and an empty barrel. If you think it will benefit your readers, and not seriously interfere with your sale of extractors, I will send you a description of it. It works first rate. I took 116 lbs. of honey with it in 4 hours, taking out the frames and replacing them in the hives without any help whatever. I am retailing extracted and some dark broken comb honey at 15 cts., and am getting a pretty good trade. I believe in developing a home market. Wishing you and bee-keepers generally (and the ladies in *particular*) the best of success,

I am yours,— B. F. SOLLIDAY.

Newport, Ark., June 3, 1883.

Friend S., you have almost started a new plan for wintering bees, by setting them in the dirt. Years ago this idea was advanced as a means of affording sure protection against the moth.—Give us the particulars of your home-made extractor, by all means.

I am always glad to have my sales decreased when it results in a public good. Wooden utensils for honey have, I believe, been mostly laid aside, however; and although a barrel, or a half-barrel, will do very well for holding the machinery for an extractor, of late years they have rather gone out of use. Very likely, a temporary extractor might be rigged up in a few hours, on a plan such as yours, so as to save a crop of honey that would be lost while waiting to have an extractor sent from a distance. By all means, tell us about it.

HAND-POWER BUZZ-SAWS, ETC.

BELTS OR COG-WHEELS; WHICH IS BETTER?

ON page 242 you ask the question, "Do we want a belt on a hand-power buzz-saw?" Friend Bradley also says, "Tell friend Kingsley to throw his belt away, and fasten the saw to the shaft that the fly-wheel is on." Well, it does seem that theory would teach us that this would be best; but I should like to affirm, that in this case there is a great difference between theory and practice. I have tried his way exactly, but must say that it does not do as well as the way I have it. Why? Well, the faster your saw turns, the faster it will cut, and the better the work it will do; and again, with the belt pulling one way on the fly-wheel, and the cog-wheel the other, there is almost no friction on the shaft-bearings, the cog-wheels being near the fly-wheel.

I think friend B.'s 12-inch saw a little improperly arranged, to not cut over 3¾ inches. I have made some of mine to cut 3 in. with a 7-in. saw. There is much to be gained in getting as great a depth as possible, especially for a ripper. The job is very incomplete when we simply turn the nuts true, and place the saw between them. For example, I use ¾-inch mandrels, but use saws with 1-inch hole, and on the first nut (octagon), I turn a place that will just fit the saw.

BLACK LOCUST.

I see in friend Wiltse's talk about honey-plants, May number, he reports black locust as producing no honey. I must confess that I was a little surprised at that; and if you, Mr. Root, or anybody else, could sit in this upstair room with a large locust-top just out the window, and see the golden-banded fellows alight upon a blossom, and begin to swell, and keep swelling until one drops off and stumbles away to his hive, I say you'd be surprised too. I think it safe to say, that each strong colony is to-day carrying in locust honey at a rate of from 5 to 8 lbs. per day. You may judge how full the trees are of bloom, by the bunch I send you.

Greeneville, Tenn. CHAS. KINGSLEY.

"J. R.," AND THE WAY HE TRANSFERS BEES.

AS NARRATED BY HIS BROTHER.

THE other evening my brother, "J. R.," gathered up his "trickets" and said he was going out to the railroad to transfer a hive of bees for the section boss. I had never seen any transferring done, so I thought I must go along; and I thought since reading the A B C, on stings, I could stand a few at any rate. We reached the place, and the first thing the women said was, they were "very bad to sting," and did sting every time they went about them. "J. R." did not pay any attention to that. While the rest of us stepped back he got every thing ready. The women wanted him to be *sure* to have every thing that he would need before he began, for they were going to get far away. "I am too!" echoed around from some half a dozen who had gathered there; but "J. R." picked up his smoker (or what is left of one), and walked up to the old box hive that the *bad* bees were in, blew a little smoke in at the entrance, and thumped the hive and picked it up, and laid it down on the ground, and in a few minutes had it all to pieces, and the comb cut out, and put into a nice hive and frames, and without their stinging either. I asked him why he did not get a new smoker. He said he did not have the money. I told him I believed that Bro. Root would send him one, for he has quit chewing tobacco for one year. Now will you not send him a good smoker? and if you want pay for it, or you do not feel like sending him one for doing good to himself in quitting the use of the filthy tobacco, he will send it soon. He also is talking of sending for GLEANINGS, though he has sent off his money for hives, and has not got them yet, and no word why they are not sent, so he has much on his mind, and is wearied sometimes about not getting his hives. He says Root does business more to suit him.

Georgetown, Ill., May 21, 1883. C. V. LINDLEY.

I am really afraid, friend L., that he gives "Root" more credit than he deserves *just* NOW. We have sent him the smoker.

AN A B C SCHOLAR'S FIRST YEAR'S EXPERIENCE.

TRIALS, TRIBULATIONS, AND SUCCESS.

ONE year ago last May I took a strange notion to try bee-keeping. I had a brother who had tried it enough to be an enthusiast on the subject. But he found better employment—he went to preaching; and the fall before, he had left quite a stock of hive material, section boxes, etc., with us. We had ten colonies of black bees, and, having all this stock on hand, through his earnest persuasion I decided to make the attempt. It was only a trial, for I had no faith in the business as a matter of profit. It was also a very trying ordeal; for, though we had kept bees on the place for a number of years, I had scarcely attempted hiving a swarm; had never taken off a box of honey, much less doing any thing else with them, and I dreaded to "tackle" them as I would a herd of wild cats. But other reasons, added to my brother's entreaties, goaded me on to make the attempt.

Of our ten colonies, five were in the eight-frame Langstroth hives; two were in box hives; one in what was intended for a movable-frame hive, but had by mismanagement been made the most immovable and unprofitable of all, and two were in small cracker-boxes. I made no effort to transfer; but one of the last two named absconded. The other one did the same about a week later. I decided to have that one, so I put it into an empty L. hive. But mere hiving was of little avail. They would come out for one to put them back, as often as four times per day. I then tried feeding a little liquid honey we happened to have, and afterward some sugar syrup; but as soon as I ceased feeding, they absconded from the hive to that same old peach-tree. At this juncture the smoker I had ordered arrived; and after a mental effort I resolved to give them a frame of brood from another hive. No soldier, it seemed to me, had ever undertaken a more daring enterprise than that appeared to me. Not one of our hives had ever been opened after they were set upon their stand. After a big dinner to make me stolid, good-natured, and brave, with smoker, hatchet, butcher-knife, a kettle of fire and smoking-wood, and my woman, I, in my shirt-sleeves, made the charge. We had always put our honey-board next to the frames, and of course they were sealed down *tight*. I had a tussle to get the board loose, killing a number of bees in the operation. An old apiarist would have enjoyed the scene, if I did not. There was I on my knees, blundering away, my partner standing with the smoker pointed like a cannon upon the devoted stockade; and every time a bee would show its head, discharging the entire volume of that battery upon it. We pretty much smoked them out, and I worried a frame out of the center. I put it and the bees, which were then hanging to their favorite limb, into the hive. You may well believe that I was discouraged when those contrary little bugs swarmed out that afternoon, after all I had done. After I had about concluded to let them have their own way, however, they felt satisfied, and quietly returned of their own accord. I had no more trouble with them on that score.

I quickly learned to do many little jobs with the frightful little insects, that I would once have thought impossible. But my tribulations were not over. When white clover bloomed, and the bees began to cluster heavily in front of the hives, I was in a great flurry to get section boxes on. I had to teach myself every thing; or, rather, I and "my woman" had to teach me, and the headwork of the latter was no small item; but I got them on—and then?—and then for eight long weeks I watched and waited for some favorable sign. Those "onery bees" *would* "lie out;" and when I would smoke them in they would lie *up*. They would settle themselves complacently in the section boxes, and fairly laugh at me as I looked anxiously for some fruit of labor on the part of the world-famed busy bee. Occasionally a colony would swarm, often having two trials of it. This failure to do any thing during what is usually the best season, the secret of which was the extremely wet weather, was very discouraging. I began to think that I could not make expenses, light as those expenses were.

About the last of July, one old colony began to work on some of the starters next to the glass. It made me smile. In two days they quit it. That made me droop. In a few days a swarm came off. I then took another look, when, oh joy! two boxes of the next row showed comb nearly to the bottom of the box. That marked a new era in that summer's history of my apiary. Soon another and then another commenced work, until 14 colonies were busy in their upper stories. The honey season had begun at a time when, as I understood, it usually begins to fail. For two months the bees labored, and achieved as I believe blacks seldom do. I realized about 600 lbs. of comb honey, almost all in section boxes, and I would no doubt have obtained more if I had not hampered them all with separators. How I did watch thier progress! From two to five times per day I would raise the caps, peep in, and calculate. How supremely pretty those boxes of white comb, when sealed, looked! and how I did smile! Thus far I have sold about 450 lbs. at an average of about 20 cents. I extracted about 90 lbs. from surplus combs, selling the most of it in lots at 12½ cents.

BEES WILL STING.

At least, mine will sting me. It is true, that in the early part of the season I seemed to learn that there was scarcely any of the difficulty and danger I had so dreaded. I got along swimmingly. I would open hives, and take out and look over frames without veil, smoke, or stings. I felt proud of my success, but feared at the same time that a good beginning would make a bad ending, and so it proved. Later in the summer, although in the busiest of the season, they got to stinging me most viciously when walking quietly through the apiary. They gradually drove me to the use of the veil when removing and putting on section boxes, although I learned to be easier and gentler with them all the time. Of course, their rabidness reached its climax upon the sudden failure of the honey-crop. As they could not get at my face, they would plant their firebrands in my wrists as thick as grass, and once they sent me in to my partner, whimpering, "Mother! won't you help me pull these stings out?" Already this season I have had my face and eyes bunged up twice, as if somebody had been fighting me.

NEW SWARMS; THEIR EXTRA ENERGY AND INDUSTRY.

New colonies store a great deal more honey than those that stay at home. New swarms were at work in the section boxes after filling the brood-chamber, when old stocks that had not yet swarmed were idling in the boxes and outside the hive. This year's colonies produced twice as much section honey as those in the old hives, with their brood-chamber full. An after-swarm brought me as much as some old colonies; and when fixing them up for winter I found a great deal more in the brood-frames of the new stocks than in those of the old. Can this be because it is the young bees are left at home at swarming? I think it is because the swarm sent off just learns through necessity to be industrious.

HEART'S-EASE, OR SMARTWEED.

A variety of smartweed, I suppose it is the English variety, if the indications of the last year hold good, must be a first-class honey-plant. The wet season kept some fields from being cultivated at all, and in them and fields of corn, where the farmers could not keep the weeds down, there was a remarkable growth of this plant. I think that my bees gathered as much as, or more, from it than any other flower, and furnished honey for six or eight weeks. The quality of the honey is excellent. I never saw comb or sealed honey of a purer white, and I am not at all sure that I can tell it from white clover by the taste. I am wicked enough to hope that the immense crop of last year has so thoroughly seeded the earth, that the farmers can not get rid of the weed this year. In connection with this I would say, that when a frost, about the 20th of September, suddenly terminated the honey-season, considerable white clover was yet in bloom, smartweed blossoms were falling, and Spanish-needle honey was about gone. The yield of the latter lasted only about two weeks. Honey gathered from plants earlier than white clover, *in this locality*, is not good. I can eat that from Spanish needle and goldenrod, but spring honey I can not "go."

QUESTIONS.

How high above the ground should hives be set?

Do you set your hives right down upon the pile of sawdust? Can comb honey be ripened out of the hive, as well as that which is extracted? An old apiarist tells me that he would render into wax all combs that had reached the age of four years, and make the bees build anew. Would that be advisable? Do those old thick-walled cells diminish the size of the bees? I am inclined to think they do. I examined some old combs. GEO. F. ROBBINS.

Mechanicsburg, Ill., June, 1883.

Thank you, friend R., for your vivid account of your first year's experience. One interesting thing in letters from beginners like you is to note the rapidity with which one can learn, under the influence of real, genuine zeal and enthusiasm. By another year you will be almost ready to give us one of the stunning reports that we are getting so frequently of late. You will see by A B C and price list that we support our hives on four half-bricks. If you object to this height because the bottom-boards rot, turn your bricks up edgwise — Comb honey can be ripened out of the hive so as to be so thick it will scarcely run, on the plan friend Doolittle has several times given.—It would be rather sad, I imagine, if our friends who buy so much fdn. were obliged to melt it up and buy more once in every four years. I should use comb ten years at least, and I don't know but that I would twice that length of time. The idea that old combs make the bees smaller, is, I believe, an old exploded humbug.

Bee Botany,

OR HONEY-PLANTS TO BE NAMED.

WILD LUPINE.

I SEND you a specimen of a honey-plant that is new to me. Please write me what you know about it; and if you wish them, I can supply you with seed, either for your own use or to sell. J. McL. BROWN.

Sowers, Dallas Co., Texas, May 17, 1883.

Answer, by Prof. Lazenby:—

This is a very pubescent specimen of *Lupinus perennis*, L.; calyx deeply bilabiate, 5-toothed. Wings of corolla slightly united at the summit. Stamens monadelphous, anthers alternately oblong and globose; legume 3 to 5 seeded, in this specimen quite pubescent. This herb is found principally in sandy soil, growing about one foot high, and is often cultivated for ornament. Several species of the genus are quite showy. The flowers of this species are blue, varying to nearly white, borne in a terminal raceme. Leaves palmately composed, 5 to 9 foliate; leflets oblanceolate, mucronate, 1 to 2 inches long, ¼ as wide; leaves alternate on the stem, pubescent beneath; generally called "Wild Lupine," but often called "Sun-dial," because its leaves are said to turn with the sun, facing it all day. W. R. LAZENBY.

O. S. U., Columbus, May 23, 1883.

When I first saw the plant mentioned above, it seemed familiar, in some way; but not until Prof. Lazenby mentioned "sun-dial" did I recognize it as a flower in our garden, away back in my boyhood. It was its peculiar habit of moving its leaves toward the sun, that used to attract my attention. As I look at it now, after having studied the great family of peas and clovers, it somehow seems to be a connecting link in the wonderful series, and an old friend besides.

A HONEY-PLANT THAT BEARS SOUR BERRIES.

By this mail I send you a few seeds of a shrub which is one of our best bee-plants. It blooms very early in spring. If you should want more seeds of this shrub I will gather some for you; but you must let me know soon, as the sheep, goats, birds, and cattle, will soon eat them all up. The bushes grow only about from 2 to 5 feet high. Please state what the botanical name is. As these berries are very sour, they are used for making vinegar. Hogs get fat on them. HERMAN FUCHS.

Tiger Mills, Texas, May 5, 1883.

Prof. Lazenby replies:—

The branch with berries, we are are not able to determine from so little material. If the gentleman will send some flowers, if he can procure them with more leaves, we will try to determine what it is.

Columbus, May 23, 1883. W. R. LAZENBY.

Now, Prof. L., I, in my innocence, should have told our friend that it was some sort of a sumac, on account of its sour berries, even if the leaves are quite different from any sumac I ever saw. Perhaps I should say berries with some sour substance on the outside, for that is really the only thing sour about them.

ONE OF THE MILKWEEDS.

Plants from Herman Fuchs, Tiger Mills, Burnett Co., Texas: No. 1 is a "milkweed" (*Asclepias*), probably *A. Michauxii*, Decaisne. It is a somewhat weedy plant, with a milky juice, and flowers in umbels, regular, 5-parted, sepals and petals united at base; stigmas 2, united and covered by the united stamens. The flowers are given a peculiar appearance by the corona, or crown of hoods covering the stamens, and often inclosing a horn-like process. The pollen is collected into two masses in each anther, and united by slender stems. In this species the leaves are long-acuminate, 2-4 inches, green on both sides; umbels, 20 to 30 flowered. Pedicels about 1 inch long, slightly pubescent. The calyx is green, sepals lanceolate, corolla greenish white, petals spreading; hoods yellowish green, closely folded inward. It is a plant often very troublesome to bees, the pollen-masses adhering to their feet, and clogging them when they visit the flowers. Fruit, follicles, in pairs.

PRIMROSES AS HONEY-PLANTS.

No. 2 belongs to the "Evening-Primrose" family (*Onagraceæ*), and to the genus *Œnothera*; but the species is not given in any botanies at my command. It is an herb with alternate leaves, 4-parted flowers, the calyx-tube united with and prolonged beyond the slender ovary. Petals 4, obovate, bright yellow, stamens 8, with long anthers; pistil compound, with a four-lobed stigma; ovary long (1 in.), and slender, 4-celled, many-seeded. The flowers are about 1 inch broad, and very showy. Several species in this family are quite pretty ornamental plants, and a number are very pernicious weeds. Found chiefly in pastures, and on the borders of cultivated fields. WILLIAM R. LAZENBY.

Columbus, O., May 16, 1883.

Our friends will recognize the former as the milkweed figured in our books, and that has so often been complained of as an enemy to the bees.

Heads of Grain,
From Different Fields.

THE MAN WHO DIDN'T WANT ANY MORE BEES.

I WISH to tell you something about the colony of black bees, which is new to me, and probably may be of some interest to you. It swarmed on the 25th of April, a large swarm; but I did not want them, and they remained on the tree over three days and nights before they left. B. B. TEMPLE.

Danville, Va., May 24, 1883.

Why, my friend, I don't see any thing half so funny about the bees as I do about you. I wonder what our A B C friends will think, to hear of a man who would let a rousing good swarm hang three days on a tree, and in the month of April too! Why, if we had them here we should expect to build up a whole apiary with them in one season; or if we sold bees and queens by the pound, we should make them do enough to pretty nearly, if not quite, buy a cow before snow comes again. Are bees so plentiful in your parts that a body could get fine large swarms in the fore part of the season, just for the asking? Well, well! I suppose they are gone; but I should really like to know which way they went, and if they left any comb inside the cluster, after their three days' sojourn, wondering all the time, probably, why you didn't "get up and dust," and put them into a hive.

SOUTH-WESTERN MISSOURI, ETC.

I settled here in 1870, and have traveled over most of this part of the State. From what the old settlers say, it must have been a perfect paradise for bees before the country was settled up. The settlers have told me they had found as many as forty bee-trees in a season, and that prairie chickens got so much honey-dew on their wings they could not fly. I have seen it very abundant, but the honey is poor and dark, and I would rather the bees would eat it than I. But we have some splendid honey-plants that are natives of this country. I guess I had better say something about honey-plants, for that is where bees get the honey.

BUCKBUSH, AGAIN.

The best native is what is called buckbush. It is a shrub about two feet high; commences to bloom about the first of July, and from that to August; and in the fall and winter it is covered with small red berries. The buckbush yields a honey that I think has no superior, and bees will fill their hives before you are thinking about it, when it is in bloom. Simpson grows everywhere. We have three or four varieties of sumac. Red-bud grows along the streams; also willow and maple on the prairie. We have a great many plants that the bees work on. There is a variety of cleome that the bees are very fond of. There is a plant, the leaves of which resemble spearmint, and the flower grows on a spike like gladiolus, that continues in bloom from June till September, and which I think is equal to the Simpson. Then we have goldenrod and wild dahlias, and sunflower in great profusion. Of the cultivated honey-plants, we have the different varieties of clover, all of which do well, but are not very plentiful, owing to the newness of the country; but poplar caps the climax of them all, except the willow jessamine, of which I wrote you. In conclusion, I will say, from what I can learn from reports from other sections, and my own experience, that we have a good bee country. We are highly favored in respect to climate, there being little or no trouble in wintering. I have never lost a hive by cold. Bees fly more here in the winter than I want them to.

Hudson, Mo., May 21, 1883. S. S. JOHNSON.

Our friends will recognize the buckbush as the Symphoricarpus, already described and illustrated in our back numbers.

SWEET CLOVER, ETC.; AND SOME OF FRIEND MC GEE'S PLEASANTRY.

I thought I had enough hives, sections, and other fixings; but when I see how strong the colonies are, with a prospect of a heavy fruit-bloom, especially peaches, and the immense quantity of sweet clover that is almost knee-high everywhere, it scares me to think of it. I expect a big surplus from sweet clover this season. You know the 369 lbs. taken two years ago was from sweet clover in August, when every thing else was dried up. Apricots opened last Saturday; peaches will be out to-morrow. Sweet cherries blossomed this morning. Well, how is Uncle Amos and Ernest, and all the rest of the girls and boys? and how is the carpet-stretcher? Tell Miss—"Uno" that the softer the wax, the easier the carpet-stretcher will work. I have got the telephone up. It works well. You ought to have heard the bees rattle it yesterday. I don't know what kind of a racket they will make on it when they swarm. Tell Mr.—(with the white hat in the saw-room)—to keep his eyes on the boy when he saws out the hives. I guess this is all you will have time to read to-day. Remember me kindly to Ernest and all the rest, especially old Mr.—what's his name that packs the hives? Uno. GEORGE H. MCGEE.

Point Marblehead, O., May 8, 1883.

SCRAPS FROM AN A B C; WINTERING.

Winter is gone, and I am through it without the loss of a single colony. Chaff packing did it. I am sorry that I have not watched the temperature at which a bee becomes stiff through cold. When we on the coldest days of winter can keep the inside of the hives above that, the great problem of wintering is solved; at least, I know one who thinks so. Some of my colonies last fall would not more than cover 6 L. frames. I left in the full number, 10, and it appears to me that the cluster moved *en masse* across the hive, following up the honey.

DYSENTERY.

Neighbor W., ½ mile from me, last fall had 7 colonies; 5 were in frame hives, 2 in box hives, all unprotected, except honey-board and cottage-roof cover. I examined them last fall, and found them in as good condition as were mine, except one, for which I gave him directions how and what to feed, but they died early from starvation; 3 others died of dysentery, caused by nothing but cold. The hives were in a bad mess; the sides were literally covered with dirt. The combs contained at least 8 lbs. of honey to the hive. There was not a bee left in one to-day, having left honey and brood in all stages. Cold was the sole cause of dysentery in this case.

TREE-PLANTING.

I have planted this spring 10 maple and 100 basswood trees, from 6 to 12 ft. high, on the sides of the public road. I trimmed some to a straight pole, and on a few I left only a few branches, and a couple I did not cut at all. I was laughed at by a few, who said I was foolish to plant trees for the benefit of others; but laughing does not hurt me any. If we sit down and wait for things to turn up, they will never turn up; the world is too full of sitters and laughers now. As friend Doolittle says, sitting around saloons never accomplishes any thing. I am on friend D.'s side there every time.

STATISTICS.

I wish to make a suggestion, which I think would be of benefit to bee-keepers in making out statistics, were they to give the coldest weather registered at their respective places, as it then would be known what they had to contend with in wintering. January 21st and 22d was our coldest — 6° below zero.

BUZZ-SAWS.

About Christmas, after studying the engraving in GLEANINGS, I concluded to build a power saw. I ran it from a shaft running 35 revolutions per minute, with pulleys to give 800 revolutions. It is not very stylish, but it is lightning "on the cut." I use 12-inch saws. I bought a second-hand mandrel, connected boxes, at a bargain, and an old 16-inch saw on it at the time. I put it on the grindstone, cleaned it up, took it to the saw-works, and had it cut down to 12 inches, and purchased a Simonds cut-off saw. No foot-power saws for me. I have made all my hives, frames, separators, and racks, and find it nice work — that is, to get every thing as it ought to be.

WILL ELLIS.

St. David's, Ont., Can., May 14, 1883.

SOFTENING THICK, OR CANDIED HONEY, BY STEAM, ETC.

You say, on page 252, "Your plan for softening honey by steam is hardly new." Well, is this your conclusion, or can you give some one's experience? Now, own up, as you did about the bees going right off without clustering, or tell us all about it; and if you know, why did you not tell us about it before? Further: if you knew about it, why did you ask the question, Does not the water from the condensation of the steam dilute the honey so much as to make it unsalable? We extracted only about 600 lbs. last spring in the way mentioned, and that was rather thicker than it should be for market. When fairly cool, nearly one-fourth was candied in the bottom. Most certainly, if we had wished to feed the honey, we never should have extracted it; neither would we recommend others to extract. W. H. BALCH.

Oran, N. Y., May, 1883.

But it so happens now, friend B., that I was not mistaken about the bees going off without clustering, does it not? In the back volumes of our journals, many plans have been given for softening old thick honey, that it might be extracted; and I had an impression that steam had been tried, but I may be mistaken. It seems to me that water added to honey, in any shape, would injure the color and flavor, and it was my impression that this was the objection urged when the idea was suggested some time ago. I can not now turn to the place where it was discussed, but perhaps some of our older readers can.

SMOKE FOR GETTING SWARMS OUT OF INCONVENIENT PLACES.

Mr. Benedict said: A good plan is to have a long pole of pine or basswood, made so it can be spliced, if not long enough, or with a groove to slide one in the other, to lengthen it; have a strap of iron on one end to fasten rags or other material to make a heavy smoke; if the bees alight in a high place, smoke them until they are dislodged. They will almost invariably alight nearer the ground than their first place of lodgement. It is best to apply the smoke as soon as they begin to settle. Sometimes they alight in the forks of a tree, and then it is necessary to use a good deal of smoke. Have another pole with a swarming-box attached, made with the sides bored full of ½ or ¾ inch holes; put this box above the bees, and if they do not run into it, smoke them in. Mr. McCreary uses the pole and swarming-box. He fastens two large pieces of comb on the pole, pouring melted wax between them to fasten them together; he seldom uses smoke. He has tried Benedict's plan, but likes the pole with comb attached best; he did not cut a limb to get a swarm last year at swarming time. The pole he uses is made in sections, to slide up to lengthen the pole.

MORROW CO. BEE-KEEPERS' ASSO'N.

Cardington, O., May 11, 1883.

APPLE-BLOSSOM HONEY.

Pardon me for trespassing on your valuable time; but are you not mistaken in regard to the honey from apple-blossoms? On page 94 of A B C, you say, "They are neither equal in quantity nor quality to clover, basswood, and some others." Now, in this locality they are better in quantity, and, it seems to me, equal in quality. My best hive gave me 36 lbs. in ten days; 4 or 5 of them very bad weather. A friend of mine who has had a large experience says he has known them to gather 10 to 15 lbs. per day, which, considering the quantity of bees in a hive at this season of the year, seems to me an immense yield. The sample I send you was about one-fourth sealed, and has been extracted 36 hours.

Unionville, Conn., May 30, 1883. C. J. SANFORD.

I really beg your pardon, friend S., and gladly change the statement made in the A B C book. Your sample of honey is beautifully clear, and has an unmistakable flavor of apple-blossoms. If I were to decide, I think I would give fully as much for it as for clover or basswood. Since tasting of your sample, I am reminded that I have often cut out luscious mouthfuls of apple-blossom honey, when the combs just began to show it, and then it always seemed beautiful; but when we got out the extractor, and took out a pailful or more, it seemed to be dark and rank. It now looks as if other honey, possibly from dandelions or hickory, might have been mixed with it. I now feel enthusiastic over apple-blossom honey again, and I should really like some of it bottled and labeled, so we might let the great sweet-loving public pass their judgment on it.

MAKING THIN FOUNDATION.

Just tell the "brothers," as you call them, when making thin fdn. into strips, just as the last end of the strip is going through, to start another, so as to let them lap a little, and there is no trouble to take up the end as it comes through. You can make the strips several yards in length this way, and cut in two as you please. You will say, perhaps, the idea is not new, and that some one has written about it before, no doubt. At any rate, I am glad to have all the little hints and helps suggested by others, whether I can suggest any thing new or not; and I think the pre-eminence of your journal lies in these small things, so fully explained that all can understand them. J. G. FITZGERALD.

Brookston, Tex., May 18, 1883.

CLUSTERING BEFORE GOING OFF, AGAIN.

I generally calculate they will cluster; but last season I had one swarm come out one day and cluster, and I put them back and gave them combs that were empty, and made more room for them. The next day or two they came out again and worked off to the south over the cornfield, nearly out of sight, before I concluded I'd better walk after them, and I had to walk pretty fast for a while to get even; then I thought I would scatter some dirt among them, as I was on soft plowed ground, which I kept up for some little way; but they still persisted in trying to make off. They went some 60 rods, when, coming to the end of the field and some bushes, they had got pretty well confused, and alighted in three or more places. At first I shook and jarred the smaller clusters, and finally got the most of them together in one place; then I found the queen, took her back in my hand, and left them to come when it should be their good pleasure. This may not hit the case; but the next day or two a first swarm came out, made off against the wind, and I let them get quite a start across the cornfield, about as far as the others, and I just did my best to stop them for quite a way, when they turned off to the west and alighted on a burr-oak bush, and I caught that queen and brought her back in my hand, the same as the other. This swarm had not been out, to my knowledge; but that they came out of hives at this time, I *know*, and they acted as though they were going a long way to cluster, any way. I was working in the yard, and saw them myself. V. W. KEENEY.

Shirland, Ill., May 10, 1883.

QUAKING-ASPEN FOR SECTIONS.

Have you ever tried aspen, or what we call quaking-aspen wood, for sections? It is the whitest wood I know of; is of very fine grain, and soft. I believe G. M. Doolittle calls it "popple;" others call it poplar; but it is not liriodendron.

I went into winter with 22 colonies in good fix; came through with 22, but one was queenless, and one a drone-layer. The rest are in splendid condition; plenty of brood in all stages, and lots of drones with some flying.

I sold all my honey last year at 20 cts. per lb.; some in sections, 1½ lbs., and some in large boxes holding from 20 to 28 lbs.; no difference on that account. I will try extracted honey this year.

GREEN R. SHIRER.

Adamsville, Ohio, May 10, 1883.

I have never tried the aspen, for there is not enough of it near us to make it any object. I have seen some blocks split out for stovewood that were wonderfully white. In localities where it can be found in abundance, it might be an object to collect for choice sections.

GIVING BEES A FLY IN WINTER.

Your contributors often speak of giving their bees a "nice fly." It seems to be done by placing the hives in the sun, and creating a summer temperature for the time, during which the bees come out, this is questionable. Some of these bees, probably a large per cent of them, are chilled by the cold atmosphere without, and never get back. The loss may be serious. Is it necessary that bees have a fly? It is said the queen never flies but once. Do the workers in the hive *ever* fly? I have some hives so located that, when their occupants are made lively by natural heat, and come out, they find it warm and pleasant everywhere. I like this plan better than locating in the sun, in the early spring. The substance with which the twigs are coated, and birds "stuck" by the feet, is called "birdlime," and is described in the cyclopedias. I mention this, as you seem incredulous. DR. J. W. THOMAS.

Abbeville, S. C., May 20, 1883.

It *is* questionable, friend T., when the bees fly out, and don't get back; but if I am correct, a good healthy colony of bees will be pretty sure to get back whenever they can be induced to fly out. Where bees are badly demoralized with the dysentery they will often fly out in great numbers, and not come back at all, and I do not know but that they would die just about the same, if they were not allowed to fly at all. We have good reason to think, many times, that a fly saves the life of a colony; and a recent report seems to furnish very conclusive evidence that this is so.—Thanks for your suggestion in regard to birdlime.

WATERING AND SALTING BEES; ANOTHER DEVICE.

If you want to keep nurse, or feeder bees, from bothering your neighbors' pumps and old soggy well-buckets, just place in some convenient spot a trough made out of some old soggy wood, but clean. Fill it partly full of water; dissolve a table-spoon heaping full of salt to three gallons of water; it may have to be stronger than this to draw their attention to the trough; but when once they have found it, a spoonful to three gallons of water is enough. The bees greatly prefer this to common water, and I believe that the brood that is reared is superior in strength to that where this is not done. Yet the best part of this economy is to save the loss of your nurse bees that have to go to pumps and wells for their water; and, in lieu of salt, must suck from manure-heaps in the barnyard. J. B. HARTENSTINE.

Mattoon, Coles Co., Ill., May 6, 1883.

Thank you, friend H. We have many times tried to get our bees to using salt water, but without success. Perhaps it was because it was used too strong. I would by all means keep up such a device, if the bees would use it, and your idea seems to take into account the fondness bees often seem to show for wet sawdust or wet sand.

BROOD-REARING LATE IN THE FALL; ARE WE SURE IT IS TO BE DESIRED?

I lost 15 colonies out of 18, from dysentery. Chaff packing and Hill's device would not save them. If winter had held on one or two weeks longer, I should have saved but one, and that one had an Italian queen that could hardly be stimulated to laying sufficiently to keep up an ordinary supply of bees. All the rest had more or less brood in all stages the last of Nov., when the thermometer ran down to zero, and very soon afterward they began to die. Has it occurred to any of our old "veterans," that so much brood in the hive at the beginning of winter might produce it? I. D. PEARCE.

Kirksville, Mo., May, 1883.

While you speak of it, friend P., it occurs to me that I once had a queen that would not lay at all in the fall, even though I fed the stock, and tried every way to get her to, because her cluster of bees was so small. When it came time, I put her with her little ball of bees into the wintering-house, with hardly an idea that she could come through; but to my surprise there was just about the same little ball of bees there in the spring; and when it got real warm she commenced to lay, and her colony did about as well as any of them.

BEES FLYING NINETY MILES PER HOUR, ETC.

Editor Gleanings:—The June No. is just received, and I am sorry to see that you have misunderstood me. I never said that it is "very dangerous for those to write on a subject whose knowledge is incomplete." What I said was, that "arguing in regard to matters concerning which our knowledge is incomplete" is very apt to lead us into error. The word *arguing* here means *drawing conclusions, proving* or *showing*, as when Milton says, "So many laws *argue* so many sins"—a common enough meaning for the word. If you will allow me, however, I will put the proposition in another shape: "One of the most dangerous sources of fallacy is the drawing of conclusions from incomplete data." If you can find a man who does not agree with that, send him along, and Barnum will no doubt give him a good salary as a natural curiosity. That we may ultimately arrive at a correct conclusion in this matter, it is necessary that the question be kept free from mere deductions drawn from imaginary facts; that is, alleged facts which have no existence. A very good example of such vicious methods of reasoning is found in the argument of E. E. Ewing on page 314, June GLEANINGS. His imaginary "vacuum," in which the bees are held and "kept above the cars with scarcely an effort," must be very amusing to any one who has the most elementary knowledge of the laws which govern the motions of aerial fluids. You imply in your note, that Doolittle and myself believe that the usual speed of bees is 90 miles per hour. I expressly disclaimed this. Some horses have attained a speed of a mile in 2 m. 30 s.: is it fair to say that horses travel at the rate of a mile in 2 m. 30 sec.? In regard to the distance to which bees will fly: A friend who has just left me says that he feels certain that they will travel fifteen miles, as he has seen them in large numbers on the prairies in the old times, at a distance of fully 15 miles from either timber or houses.

JOHN PHIN.

Cedar Brae, N. J., June 5, 1883.

Thank you, friend P., for pointing out to me my error. I certainly did overlook the fact that your caution was really about drawing conclusions; but even if it was, I thought you were a little rough on the brethren, and, begging your pardon, I think so yet. You are a scientific man, and accustomed to "drawing conclusions" in a scientific manner, while we, many of us, are hard-working men, without much college training; but for all that, we are sound and practical; and if the present advanced state of scientific bee-keeping is not largely the result of our work and research, I don't know whose work it is. You are, perhaps, aware of what wretched work Agassiz and Tyndall made of it, when they thought they might be able to help us. Friend Ewing, whom you cite, has perhaps not worded his remarks just as he might have done; but for all that, I think we all understood clearly the important fact he gave us. After he mentioned it, it occurred to me that I had seen leaves carried along by a train, in exactly the way he describes. We want you to help us, friend P.; but please bear in mind, we bee-folks are all brothers and sisters; and if one makes a mistake, he expects to have it pointed out to him with brotherly kindness. You have called brother Ewing's philosophy "amusing;" but I am sure if he thinks best to reply at all, it will be in a Christian spirit of gentlemanly courtesy.

FLORIDA; FRIEND WOLFENDEN'S IDEA OF IT.

So you think we need the cold weather to sort o' brace us up and make us fly around lively, do you? To speak plainly, you think if we go to Florida we shall get lazy. Well, you are about right. The natives all say they would rather sit in the shade and see the negroes work than to do it themselves. They also say I will soon be of the same mind. Well, so be it. I am going to try it. I have bought a small orange-grove, and am going down in the fall. Part of it is in bearing too. Don't you want a box next fall?

ORANGE-GROVES.

Shall I tell you of the orange-tree? They are raised from the seed, and, unlike the apple, the young tree will produce fruit like the parent stock, and bear in from seven to ten years. Young trees are also taken from the woods, but these have to be budded, as the fruit is sour and bitter. These will bear in from 5 to 7 years from the bud. The orange trees blossom in Feb., and the fruit is picked in Dec., and you do not find blossoms and fruit in all stages of development, as I had been told. The fruit will remain on the tree for months after it is ripe; but it does not, for it is picked and sold.

June 3, 1883. J. L. WOLFENDEN.

WINTERING IN SIMPLICITY HIVES.

I have 12 colonies of bees. They wintered nicely on summer stands, four or five in double-walled hives; the rest, no protection except boxes over the hives to keep off cold winds—all in your Simplicity hives. The food for all was granulated sugar syrup, which I think is *the* feed for winter, every time. No dysentery, no spotting the hives. Hives were pushed forward so there was at least one-half inch open space the whole width of hive. The second hive was set on top with chaff cushion, and holes bored in ends of cover to let off the moisture, and every thing was dry and nice. Hill's device was over the frames, which I think is far preferable to punching holes in the combs. All are breeding nicely now.

R. J. FOX.

Natick, Mass., May 18, 1883.

EARLY SWARMING IN MAY.

Tell your friend who crows over his early swarm of the 18th of May, that he will have to do earlier business than that, for he is badly left. My friend John Colvin, of Schellsburg, writes me on the 28th of April,—at least, the last week in that month,—"I have just hived a very large *natural* swarm of bees, and have been stung like the dickens," if you know how that is. He has also had some five or six since. A Mr. Shondenour had two *first* swarms the *first* week in May. We have a late season, and locust and white clover are here together.

ED. D. HECKEMAN.

Pittsburgh, Pa., June 5, 1883.

PURE HONEY, AND FRIEND MUTH'S "PLATFORM."

The following letters explain themselves without comment:—

Mr. Chas. F. Muth:—We have an inquiry from Milan, Italy, asking us to name the most important manufacturers of glucose in this country. We presume that you are the best posted gentleman in the United States on the glucose question, and write to ask if you can give us the names of a few to transmit to our Italian friend. D. LANDRETH & SONS.

Philadelphia, Pa., May 9, 1883.

Reply, by friend Muth:—

Gents:—Your favor is at hand, asking me for the names of the most prominent manufacturers of glucose. I am a dealer in *pure* honey, and never purchased a pound of glucose; consequence is, I have sold more than 300,000 lbs. of honey since last October, without the aid of a drummer. New York and Chicago honey-dealers are better posted in regard to glucose manufacturers. It appears that our European cousins are acquiring the same tendency to corruption that we possess. I am sorry that we can not accommodate you, and remain yours truly,

Cincinnati, O. CHAS. F. MUTH.

CHICKENS IN THE BEE-YARD.

The question is asked, if any of the fraternity have ever tried keeping chickens in the same yard. The question is answered, but not positively, by yourself. I have let my chickens run at will amongst my bees. One evening last summer my wife called my attention to the act of an old biddy gobbling the bees going out and coming in at the entrance of one of my best hives. I looked too and saw her take and eat them as fast as she would have eaten corn. I called "Fancy," our little terrier, and it was but a short time till that hen was caught and killed, and we found plenty of bees in her crop.

GOING OFF WITHOUT CLUSTERING, AGAIN.

I can stand up, and hold both hands up for the truth of it—two cases of it before I took GLEANINGS. I have had several go off without clustering, and one I very well remember I watched for some time, knowing before it came it would be a large swarm; and being anxious to save it, I watched diligently. Well, it commenced to come; and as fast as it came it also went, in spite of all the rattle of tin pans and cowbell. Off she went with the whole family with her, and I after her; but they flew faster than I could run, and "you bet" I was considerably out of fix about losing it, after such a hard run. Since I have taken to clipping queens' wings, I never lose a swarm. W. H. FERUGUSON.

Bloomdale, Wood Co., Ohio.

A GOOD WORD FOR HYBRIDS.

If I could get any and all bees as good as one swarm of hybrids I have, I should be fully satisfied. They stick to the combs nicely, and are gentle to handle, and such workers I never saw. They just pass in and out, and never stop to tell stories, but work and talk at the same time, and you know that with us, where there is so much to do at all times, if we stop about the door to talk, we shall be just so backward with the thousand and one jobs that must be done to make a success. I think it's something so with the bees. I am going to breed one batch of queens from this swarm for my own use, and see what they will be. Of course, they and their progeny will be dark, but I shall look for light honey from them. I should like to have you see that swarm. You could look them over without smoke or gloves either. The queen is 3 years old, but does her own housework the same as ever, having 7 Langstroth frames nearly full of brood May 24, and also about ready to take boxes. Don't you think I have one stock to feel pleased with? E. P. CHURCHILL.

North Auburn, Me., May 24, 1883.

HIVING-BASKETS, ETC.

Seeing quite a little said about hiving-baskets, etc., let me give you the kind I have used for the last five years. It is a common market-basket, one that is made out of round willow, such as almost any grocery store keeps. They hold about three pecks, and are made oblong, with flaring sides. To prepare them for bee use, I line them with cheap cotton cloth. After cutting off the handle (they usually have a handle on them) on one side, attach a piece of this factory cloth, large enough to cover over the top. The one Mr. Heddon describes as using is too large; it lets the bees spread out too much. Little things go to make up larger ones in a season's work, and those who haven't any thing better may, if they choose, try my kind of a hiving-basket.

Glenwood, Mich., May 24, 1883. W. H. SHIRLEY.

THE SYRIAN BEES; SOME QUESTIONS ABOUT THEM.

Some time ago I wrote to D. A. Jones for particulars about the Syrian bees, but have not heard from him. In what estimation are they held to-day by disinterested parties? Are they better than any other imported bees, and in what respect? Are they better workers than the Italians? Are they hardier or larger? Are they docile?

Piqua, O., May 26, 1883. J. D. KRUSCHK.

Friend K., if you will read over the reports in our back numbers for the past two or three years, you will see that very diverse and conflicting views are held. While some have decided them to be in many respects better, others have decided right the other way. I believe all are pretty well agreed on at least two points, however. These two points are, prolificness and temper. They will rear brood faster than Italians, without question, and, as a rule, they sting worse, especially where one does not know just how to take them. They are little if any larger, and, as a rule, I do not believe they are hardier.

PRESSING THE WIRES INTO THE FOUNDATION.

I press wire into fdn. with an instrument like a tracing-wheel. I took a spur-rowel for the wheel. The points should be about ½ inch apart, and at least ⅛ inch wide across the wires, and just wide enough the other way not to cut the wires; have the points creased a little, so they will not slip off. I think this an improvement on the carpet-stretcher. My sheets are drawn out over the wires so nicely, with not a cell changed, that if you could not see the wires you would not know where they are. Try it.

H. A. HARRIMAN.

Grand Lake, Ark., May 21, 1883.

Friend H., the wheel is an old device, and was described in our back volumes some time ago. We have used one, but it bothered some by not going up close to the frame, and we think it does not work as well, nor as rapidly, as the carpet-stretcher. Since adopting the latter, we have had little if any complaint about frames shipped by freight or express, filled with foundation.

HOW DID THEY GET THEIR QUEEN?

The following rather curious case came under my notice recently. A neighbor who keeps a good many bees noticed that a weak colony had a great many drones. He opened the hive, and found drone brood in worker-cells. He also found a fertile queen, evidently a young one, and a cell, half destroyed, from which she had been, apparently, hatched. The eggs from this queen all produce workers, and the drone brood has now disappeared from the hive. The bees in the colony are all black, but the bees from this queen are hybrid. The presence of the drone brood would seem to indicate the presence of a fertile worker. I can see no solution to the problem, unless it is that the fertile worker died, and the queen-cell started from her brood failed to come to maturity. This queen might have got into the hive from some colony that had swarmed out. What do you think of it? Do bees ever *steal brood* from which to raise a queen? **CHAS. BOWLES.**

Hillsboro, Ohio, June 5, 1883.

This looks something like a case of stealing an egg or larva, friend B., but yet I think there is another and easier solution. The old queen, before she failed entirely, laid drone eggs in worker-cells, and the bees, from instinct, started queen-cells from some of the last worker eggs she had laid. The drones in worker cells were not all hatched when the young queen commenced to lay, and this was the state of affairs when the hive was opened. The young bees were hybrids, because she met an Italian drone from some Italian stock in the neighborhood.

MOVING TO FLORIDA.

If any persons intend to come to Florida under the impression that there is such a great difference between making a living at the North and here, I think they had better change their ideas quickly, and stay at home. If a man is willing to work, let him come; but if he is not already comfortably fixed where he now is, he will find that, if he has to live by labor of any kind, he will have just as much work here to do as elsewhere, to make the *same* living; and, in a great many cases, more inconveniences than in a more thickly settled place. I believe the future here is brighter for a *young* man than almost anywhere else in the United States; but the first four or five years will require hard and steady work. So far as bee-keeping here is concerned, I can not speak, as I have had no experience in that line. As regards any one coming here for health, he must judge for himself, for a man will do many things for health that he would do for no other cause. As a State, I think Florida will rank among the first, if not the first. I should like very much to see our State settled by people from all sections, provided they do not come with the idea that they can live without working *themselves*, or paying for the work. **D. L. ALEXANDER.**

Altona, Orange Co., Fla., June 8, 1883.

FROM A "FRIEND" INDEED.

Although I am a stranger to thee, and but a new subscriber to thy valuable journal, this being my first year, I want to thank thee at this time for the many kind words and good counsel which I have read in the four numbers of this volume. I am very much interested in reading the various departments, but more especially that coming under the head of Our Homes. I think that part alone is worth more than two or three prices of the paper. I bought two stands of bees last fall; and in order to get posted on the subject I subscribed for GLEANINGS and the *Kansas Bee-Keeper*, and bought a copy of A B C. Bees have come through the winter all right. If I live I will report at some future time what my success at the business may be. I hope to make it a success, but if I do not, and the bees all die, don't put me down in the "Growler's Column," for I do not propose to grumble and complain, but expect to try to live so that I can praise the Lord and be happy. **JARED P. ATKINSON.**

Tehama, Cherokee Co., Kan., April 7, 1883.

WAX AND ROSIN FOR FASTENING STARTERS IN SECTIONS.

What per cent of wax and rosin did friend House use for fastening fdn. in section boxes, as mentioned on page 247, May GLEANINGS? Our bees, 14 stands, are doing finely. **C. P. HOCKETT.**

Jonesboro, Ind., May 24, 1883.

Mr. House replies as follows:—

I used 50 per cent or more of rosin. This makes a very firm cement. Rosin alone would be too hard and brittle. Keep the mixture just hot enough over a lamp so it will not harden on top.

How are you all? and how do the boys get on with those estimates? They have my sympathy. I have been through my 40 swarms of bees, and find them in most *excellent* condition; a number have 10 *full* frames of brood. Apple bloom has just begun. I declare, it seems as though I'd gained 15 or 20 pounds since I got out of doors, and had a chance to kick. I closed out 325 lbs. of honey I had left, in Chicago, at 9 cts., and think I did well. There is a large stock on the market yet. **WALTER B. HOUSE.**

Saugatuck, Mich., May 30, 1883.

May I suggest, friends, that rosin has been objected to, on the ground that it is liable to give the comb honey a resinous flavor? Perhaps this might not happen, unless some careful consumer should scrape the section to get his full money's worth, and may be it will never happen at all; but I thought best to mention it.—I thought, friend H., we gave you room enough to "kick," when you were with us here in the office; but it occurs to me now, that college boys often require a whole ten-acre lot, with the bars down besides; and I have heard that they sometimes feel cramped for room even then. I am very glad to know you are enjoying your vacation so hugely. Can you not take time to give us some more notes occasionally?

QUEENS THAT WON'T LAY WHEN NOT ALLOWED TO SWARM.

My queens all have their wings clipped, and some of them, after several attempts to swarm, stop laying. They did the same way last season, and in each instance I replaced the old queen with a young one, and all was well. Now, can you tell me what will be the result if I let the old queen remain? Will she begin to lay again? All the queens that act in this way are two years old, and in very strong colonies. **SILAS H. HICKOK.**

Bethel, Conn., May 26, 1883.

Queens do often refuse to lay, after a swarm has come out and they are put back again. In fact, it is so difficult a matter to make a swarm stay and work, when they do not want to, that I have advised in the A B

C not to undertake it, as a general rule. It is not only the queen, but the bees too, that, when "convinced against their will, are of the same opinion still." Put them in a new hive; and when they get well at work, giving them their old combs of brood, and unfinished sections, will often do; or sometimes they will go ahead, if their old hive is simply carried to a new location. But trying to make a new colony go back into a hive out of which they have just come, either by queen-guards or clipping the queen, is usually a rather unprofitable undertaking all round. Put the young folks into some kind of a new hive, and let them enjoy the fun of commencing housekeeping after their own fashion, and they will pay all expenses, nine times out of ten.

FROM 29 TO 60, AND 1600 LBS. HONEY.

Well, here is my report: 1600 lbs. of honey, half comb and half extracted, and increased from 29 to 60; sold to 49, and came out with 49, all in fair and strong condition—that is, in bees; but I lost 4 queens of old age. One drone-layer died; that saved me from hunting her up myself, and I lost 2 young queens from one cause or other, so I doubled queenless swarms with weaker ones, and sold this spring, and doubled, from 49 to 36, and to-day at 10 o'clock I got my first natural swarm. Cherry-trees are just fairly in bloom.

WATERING BEES IN WINTER.

I will tell you how I watered my bees this last winter. I have a rubber syringe, and every time the bees got restless I would get a dish of milk and warm water, and squirt in at the entrance about a cupful of water, and it would settle them every time. Those I watered came out strongest. I think it is foul breath that makes the bees die, instead of dampness, just as poorly ventilated schoolhouses affect the scholars. H. L. WARSTLER.

St. Johns, Mich., May 29, 1883.

HOW FAR HAVE SWARMS BEEN KNOWN TO FLY?

A gentleman of undoubted veracity told me of a swarm that came out of a hive which belonged to his father, that went 4½ miles. They saw them as they went off, and they were seen twice in the air, and when they entered a hollow tree. As they were going in the same direction, the same day, and not a great while between, there can be but little doubt that it was the same swarm. I had a swarm that came out last year, that went nearly a mile.

UNSEALED BROOD NOT A PREVENTIVE.

This same swarm had unsealed brood given them, and was placed in the shade, but "away they went."

COFFEE SUGAR FOR WINTER STORES.

I should like to add my "little mite" in favor of sugar for winter. My bees were fed with syrup made of coffee "A," as per A B C, for the winters of 1880 and 1881. They came through in good condition. I use the 1½-story hive, with chaff division-boards, and cushion top of frames. The hives I place in a shed (for winter), open to the south-east.

"THAT CHEIROGRAPH."

I could not get more than 25 to 35 good impressions from the one I made. I wrote to friend H., and he advised me to buy one, as it was quite a job to make a good pad. For the benefit of those who wish to make their own, I give the following: Take 18 (fluid) ounces glycerine; 2 ozs. gelatine; ½ oz. white glue, and 2 drops carbolic acid. Heat them separately, then stir all together. Do not heat the acid. Make the aniline ink strong enough to look bronze on the paper when dry; 155 copies have been taken from a pad made from above recipe.

DO BEES EVER COME OUT WITHOUT THEIR QUEEN?

A swarm came out to-day, and flew around in the air 15 or 20 minutes, then went back again. I looked for the queen, and found her walking around on a comb; found three or four queen-cells with eggs in them. E. H. COOK.

Andover, Conn., June 7, 1883.

KENTUCKY, AND THE WAY THEY DO THERE.

Bees are doing well, making honey fast from the white clover, poplar, persimmon, etc. The white clover is better now than it has been for several years. I see, or hear, of a swarm every day. A swarm passed over my shop this morning. I am making hives as fast as I can, for my life, but the old "fogies" won't buy a hive until the bees swarm, and while they are settling, Old Fogy sends "John" down to "Mayes'" shop after a hive, and then, perhaps, when he gets to the shop he finds all the hives that are nailed up are engaged. John then returns without a hive (plenty in the flat, but too late to nail one now), and Old Fogy says, "Well, John, we can put them in this," and backs out of the smoke-house with an old nail-keg, or something similar, and the old man puts the little architects in the old musty thing while John stands covered up under some bushes that may be close by. I am trying to get the people to take an interest in bee-keeping, and have made very good headway. I am making a hive like your Langstroth hive, to take a Simplicity upper-story or cover as you have in the cut on page 19 in catalogue. W. M. MAYES.

Gordonsville, Logan Co., Ky., June 5, 1883.

A QUEEN-CELL NINE DAYS IN HATCHING.

I write to tell you about a queen bee, and how she acted. On June 2d I took a queen-cell from a colony, and gave it to another, which had been without a queen for two months. I had given them eggs several times, and they would not try to raise a queen. How long do you think it took her to hatch? By the record I kept, it was nine days. Then I opened the cell to see whether she was dead. But she was alive, and ready to come out. I took her in my hands, held her a few moments, then let her loose on a comb where were two sealed queen-cells. She began to tear one down. Do you think she will be as good as one which hatches on regular time?

Edna, Kan., June 11, 1883. W. E. POTTS.

If the cell had just been sealed over, friend P., it would make a difference; but nine days is a pretty long time. I think cutting her out will make no difference. Please report in regard to her.

ALLEY'S PLAN OF REARING QUEENS.

In GLEANINGS for June you give a description of a plan for having queen-cells made somewhat after the manner given in the Handy Book, and desire to know if Mr. Alley didn't get the "idea" from the same, as given in GLEANINGS some time in 1880. No, friend Root, I did not get the "idea," or any part of my method of queen-rearing, from any book or bee journal. Twenty-two years ago, Mr. E. A. Brackett, of Winchester, Mass., then agent for Mr. Parsons, of Flushing, N. Y., for the sale of Italian queens, tested the same plan for cell-building, as given in the last No. of GLEANINGS. Mr. B., as well as myself, found *that* way of cell-building impracticable (for reasons that all will who test it thoroughly), and abandoned it, and I am quite sure every one who tests that way will soon give it up. Then again, friend R., there is another reason why I did not get the idea from any thing that ever appeared in GLEANINGS or any other journal. I never saw the number of the journal you alluded to (1880); and if I did, I did not read the item you speak of. I seldom ever read much in any journal, unless some friend calls my attention to some particular article. And again, friend R., I have been rearing queens by the present method since 1878, a part of which I can prove to you, if you so desire, and have been experimenting on this thing for 22 years to perfect it. I think there is a good deal about my method of queen-rearing to make it a success, besides merely having cells made in rows. My system is the most perfect and systematic of any in use. If you can find any thing new in regard to queen-rearing that has not been tested here, I should be pleased to see it in print. We have tried and tested every namable experiment ever thought of.

Wenham, Mass., June 14, 1883. HENRY ALLEY.

NEW HONEY, AND SNOWSTORMS.

From the 16th of April to the 25th we had fine weather, and the bees gathered plenty of new honey. I extracted 12 lbs. of new honey on the 20th of April, from one colony, and left 5 or 6 lbs. of new honey in the hive, with plenty of old capped honey, and this was a half-blood Holy-Land. But since May 1st they haven't done much, on account of rain and cold weather. They had only two or three hours in mid-day that they could work nicely; and on the 21st and 22d it snowed pretty fast for a few hours, with the apple-orchard in full bloom, and the thermometer 4° above freezing. J. C. MISHLER.

Ligonier, Noble Co., Ind., May 23, 1883.

A CLEANSING FLIGHT; IS IT ALWAYS AN ADVANTAGE?

On page 324, you thank Jas. Beaton for facts given regarding one swarm purchased, which had a cleansing flight in March, that lived, while the 29 not purchased all died, not having a cleansing flight at that time. Well, here is another fact to put beside it: In the fore part of February, 1870, I purchased one swarm of a party (having 40 colonies all in box hives), and moved it 2 miles over a rough road. Upon reaching home I placed them in a cellar, thinking to set them out for a fly the first good day. This came the last of February; but as the colony purchased was quiet, I let them be where they were till the middle of April, when they were set from the cellar in splendid condition, and turned me $45 that season. The 39 left had a good flight in Feb. and March; but on May 1st, all were dead.

Borodino, N. Y., June 11, 1883. G. M. DOOLITTLE.

I confess the above is a little stumbling. If it points out a truth, the truth would be something like this, it seems to me: Conditions that would save a colony at one time, might prove the ruin of them at another. In the above case, I think I should prefer to take the chances of having the bees so located that they could take a fly of their own accord when the weather was suitable; but I would by all means have them protected from the prevailing winds.

Ladies' Department.

HOW TO MOVE BEES, ETC.

I WENT into winter quarters with 27, and one died. All the rest came through in splendid condition. We sold our farm, and had to move 9 miles, and every one was wanting to know what I was going to do with the bees. I told them I would take them with me. So we set the day to move; and the day before, I went and packed them all snug in the lower part of the hive, and then late in the afternoon I tacked wire screen over the front to keep them in, and then they were ready to move. My husband put his rack on his wagon that night, so as to have no delay, and then next morning we loaded the bees into the wagon. We set the hives in two rows, side by side, until it was full, and then we set on top of them another row of hives, and we got all of the 26 into the wagon. I tell you, it was full. We then put two straw beds on top, and tied them down tight, until they were solid, and then we started and went slowly, so as not to jar them until we arrived at our new home, and then we set them out. I tell you, the little fellows were pretty cross, being in prison. I did not have one comb broken down.

The bees have done well since we moved. I sold 3 swarms for $10.00 apiece, and that left me 23, and I have 7 new swarms. I like to work with the bees; but I have to put on the armor, to keep them from stinging. They sting me terribly when they can. Part of them are very cross to handle, and part are very quiet. MALINDA A. WILKINS.

Seneca, Kan., May 27, 1883.

TWO OLD QUEENS IN A HIVE, ETC.

We have 19 colonies of bees all in good condition. All wintered in cellar with thick cushions on and covers off. I found two old queens in one hive, laying side by side. One had both wings off. My husband fed oil cake to the stock early this spring, and the bees would gather thick on it wherever they could find it. MRS. B. L. SCARLETT.

Anita, Iowa, May 17, 1883.

"TRAMP" BEES.

Now don't put me in Blasted Hopes, for I am not a bit discouraged; for a bad beginning makes a good ending. But I do think the spirit of emigration has taken possession of my bees. They will swarm, and settle all right; are easy to hive, but they will not work. They are genuine tramps. They stay in the hive from three to seven days, then take a stampede, then I herd them like sheep. I sit down and let them fly until they settle; then I hive them and bring them back. Sometimes they will stop two or three days; sometimes only a few minutes, and away they go; and this has been the experience of nearly every bee-keeper here. Now I shall put two swarms together, when they will not work alone. I put four swarms into two hives yesterday, and one of them is at work finely, and I think the other will go to work now.

QUEENS THAT ARE NOT QUEENS.

I don't think they have any queen when they act like that; do you? There is some kind of a bee in all the hives that act so, that some call queens. I will send you three. Tell us what they are. Some of the hives have eight or ten; but the bees kill every one they can get. I think they are too small for queens. I sent to H. A. March for queens, but he said he could not send out any until the middle of June; that will be too late; my bees will be done swarming before that time.

MRS. NELSON KELLEY.

Ferndale, Whatcom Co., Wash. Ter., May 30, 1883.

I confess, my friend, your name is quite an apt one for bees when they get the swarming mania, and won't stay at home at all, but let the whole honey season pass by, while they cut up in the way you have described. I have once or twice seen small swarms go out with nothing but one of these small shiny-looking bees, which they seemed to behave toward as if it were a queen; and the way I did was to pinch off their heads as soon as I could single them out. Some of them had a sort of resemblance to a queen, but they were no larger than worker bees. It might be well to inquire how it is that a colony comes to have such queen-workers, but I am inclined to think it is rather a demoralized state of the workers, and that they select some bees and hang around them until they get the shiny, sneaking look they usually bear. I have wondered if these bees were not mostly made up of those that spend their time buzzing about hives, and trying to rob?

Since the above was written, the three queens have come to hand, for queens they are, I should say, even though they have a queer look. The shape is rather short and thick, something like a drone, and they are shiny black. I have mailed them to Prof. Cook, to see if their anatomy differed in any way from ordinary virgin queens.

TRIBULATIONS OF AN A B C SCHOLAR.

I feel assured you will not be annoyed with me, coming to you in my trouble; for I am about in the condition of mind as the one represented in your A B C book, on page 284. Two years ago my mother, hearing the noise of bees in the air, ran out and saw them coming toward the house; and laying hold of the bell-wire she succeeded, by vigorous jerking, in making so loud a noise that the bees were confused, and thought it best to wait until they could hear their own voices before going further, and so they settled near the house, on a low tree; and with the assistance of the hired hand, she succeeded in getting them into an old box hive about 12×12×2½ ft., and in the evening father carried them and put them by the yard fence on a board, and you will wonder if I tell you that we were all very proud of our newly acquired treasure. By watching them day by day we found them working nicely, apparently contented and happy, and succeeded in laying up sufficient store to take them through the winter; and as we knew nothing of the wonders of modern apiarists in handling the little busy-bodies, we were content to let them stand in the box, without being able to even see what they were doing, until an uncle came to see us, who had been working with bees for several years, and reading your books. He persuaded father to make two of your Simplicity hives, and he tore the old box up and put the bees in two new ones, dividing the colony, and making two out of it. They worked nicely, and laid up considerable honey. During the honey season we took about 100 lbs. of honey from them, and left them enough to winter on. We put them in chaff hives last winter; and although the winter was so bitter, they lived through nicely. We had some little trouble with them this spring, and during the cold weather we had to feed them a few days.

Then came swarming season, the saddest of all seasons to me. My first swarm came out on Sunday, as we were just starting for Sabbath-school. It was 2 o'clock P. M. We managed to get them settled on a tree inside the yard. Mother and myself got them started into the hive (father being absent), and again started for Sabbath-school. We got back home about 5 o'clock. The bees were mostly in the hive, a dozen or two flying around the hive, seeming to like the outside better than the inside. We then carried the hive about 12 or 15 ft. from where they settled. I looked at them the next morning; they had built 3 or 4 inches of comb on 4 of the frames. They did not seem to be satisfied, however, and father suggested that we give them a frame of brood from the old hive. We did so; but about 1 o'clock they swarmed out. We got them settled, and in the hive again, but we had just got into the house when we heard the buzz of bees swarming. On going to the door and looking out, we found the other colony swarming. They settled on a tree close to the house. Father sawed off the limb they were on, and carried them to where we wanted them to stand. They went to work building comb, and seemed as if they meant business. We gave them a frame of brood from the hive they came out of. Both swarms seemed to be getting along nicely; but the next day, about dinner-time, the first swarm went out again. They had about all got out of the hive when the second swarm commenced coming out again. We got both swarms settled, by main strength and awkwardness, you might say, for we all threw dirt and water, and pounded tinware like good fellows.

We got them hived, but they seemed terribly confused. We examined them, and found that both swarms had a queen apiece. About 4 o'clock both swarms came out again. We threw dirt and water, and rattled pans as before, but with no good results with the second swarm. They went off in spite of us. We succeeded in getting the first swarm settled, and in the hive again. We all chased the swarm that went off, but lost sight of them in a little while.

The first swarm stayed with us till next day about 11 o'clock; they then came out and took their flight in the same direction that the others went. Now, if you have the patience to read my story through, you will not wonder at my being down in the mouth. As the bees were given me to handle, you can readily see that reputation is at stake. If you have the time (and I shall wonder if you do) to read this, and answer this one question, I shall be greatly obliged: What made the bees go off?

MAGGIE A. BYRNS.

Mt. Sterling, Brown Co., Ill., June 11, 1883.

Well, friend Maggie, you have had trouble, sure enough. No wonder you call the swarming season the saddest of the year, even if bee-men in general, and bee-women too, if I am not mistaken, do unite in thinking it the happiest of the whole year. As you state it, I can hardly see where you were at fault, and I can't give any other reason for the bees behaving as they did, more than that they had got the swarming mania, and had their trees picked out, and were bound to go. I have had some such troubles myself, and I once declared I wouldn't have a queen in my yard whose wings were not clipped. Afterward I took to artificial swarming, and kept the bees so well divided they have never since got much of a chance to swarm. I tell you, it just makes me wild to see large early swarms going off, and leaving nothing but a queenless hive with a few bees in it. Who can comfort Maggie in her distress at the loss of her bees? Perhaps friend Doolittle can tell her where she erred in her management; or does he have large early swarms go off in the same way occasionally? I confess that losing two in just that way does seem wonderfully provoking.

Reports Encouraging.

FROM 11 TO 34, AND 1480 LBS. OF HONEY.

THINKING you would like to hear of a novice's experience in bee-keeping, I send you this. I commenced in Feb., 1882, with 11 colonies, blacks and Italians mixed; in the fall I had 34 colonies, from which I got a yield of 1480 lbs. of honey. I put them in the cellar the last of Nov.; took them out the 4th of April, 1883. They were in good condition. We had our first swarm May 29th; have had 7 since, one colony swarming three times.

Belle Plain, Ill., June 11, 1883. M. K. QUALLE.

SAW-PALMETTO.

We have extracted 61 gallons of saw-palmetto honey in the past few days. I wish I could hand you over a sample of it. ANDREW FROSCHER.

La Grange, Fla., May 16, 1883.

I expected to be placed in Blasted Hopes, but every thing is away up at present — bees swarming, and for the last five days the hives I have on scales have put in 10 lbs. per day. "How is that for high?" G. W. LECHLER.

Newhall, Los Angeles Co., Cal., May 27, 1883.

FROM 5 TO 32, AND 500 LBS. OF HONEY.

I began in the spring of 1882 with 5 stands of bees, and increased, by artificial swarming, to 32, and found and transferred from trees, 10, which gives me this spring 42 stands. As for the honey of last season, I did not keep a correct account; I think about 500 lbs., only 100 extracted.

Handly, Tex., March 7, 1883. L. R. GIVENS.

NEW HONEY.

The prospects for honey have not been better for years. I have already very nice sections of fruit-blossom honey. I have not seen the locust so full of buds in my life, and hundreds of large trees in reach of my bees. The fields and roadsides are covered with clover. ALBERT HAKE.

Manchester, Pa., May 22, 1883.

CALIFORNIA; A GOOD REPORT FROM.

After several poor years for bees and honey, we are now having a good season thus far. My bees have increased from 28 to 65 hives this spring, and still they come, and honey comes in fast. We labor under many disadvantages with box hives, 150 miles out and back for lumber, and 3000 miles from your factory. I have never yet seen any foundation.

Imusdale, Cal., May 22, 1883. N. W. FALES.

I started this spring with 14 stocks; have had 6 swarms. I never saw better prospects for a big honey crop. White clover is in bloom, and is everywhere, nearly. I have 9 stocks in surplus boxes, just a "going it." You had better think, with my farm work and the bees, I am kept on the go. But, let them "whoop 'er up." C. H. MCFADDEN.

Moniteau, Mo., June 11, 1883.

I have been in the bee business 17 years, but I still must have GLEANINGS. I can not well get along without it. I have wintered 72 stands; lost 2 out of that number. I have sold nearly 3 tons of extracted and comb honey around home, and I did not haul it around either. They came to the house, and took it away. H. F. CARPENTER.

Polo, Ogle Co., Ill., May 28, 1883.

TEXAS; A GOOD REPORT FROM.

I commenced this spring with 4 hives, and have increased to 10. The four old hives are full of honey. My bees don't notice the horsemint this year. I guess they will work on it after awhile. They went for the horehound, but it is about over now. Linn will soon be in bloom. I expect to get lots of honey from it. J. D. WERNER.

River Side, Walker Co., Tex., May 18, 1883.

REPORT FROM OUR FRIEND O. M. BLANTON.

The cold and rainy spring has caused bee-keepers to be quite backward in securing honey. On the 21st of this month the thermometer descended to 53°, and for 3 days we felt quite blue; but now the temperature is up in the nineties, with gentle showers, and the bees are working with redoubled energy on the white clover, which is more luxuriant and abundant than ever known. I started this season with 201 queens with strong colonies, having sold 122 colonies; and after uniting the queenless ones, left me the above number to gather in the nectar of our rich alluvial country. I have extracted to date 5800 lbs.

Greenville, Miss., May 30, 1883. O. M. BLANTON.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

AFTER seeing many glowing accounts about profitable bee-raising in GLEANINGS, I feel it my duty to make a report of my brother-in-law, and my own blasted hopes of the present year. Ten years ago, when a youth of 18, I commenced bee-raising with 2 hives, with all the enthusiasm of a beginner. I made an extractor, which, though rough, did good service; I also wrote two articles on bee-raising for the *Southern Cultivator*. Eight years passed, every one of which I had plenty of honey in the month of May, to pay me well for my trouble and expense; but I had in all that time hardly any swarms, and my enthusiasm had settled down to the freezing-point, when I reached the spring of 1882 with 3 hives; after a short absence from home I found they had unexpectedly increased to 8; and with the splendid flow of honey that the month of May brought, my enthusiasm again reached its highest point. At the same time my brother-in-law was caught by the same enthusiasm. He bought 25 hives in Langstroth frames, and procured all the machinery necessary for a modern apiary, and the present spring found us as determined as two men full of energy can be, to force the increase of our bees, which they had generally failed to do, by natural swarming. The never-failing honey-month of May came, and failed, on account of dry weather and high wind; and to-day my brother-in-law, with 40, myself with 12 hives, have to resort to feeding. Of 4 queens I raised, I lost 3 in the high wind of the spring. H. FRANKE.

Blackjack Spring, Fayette Co., Texas, May 20.

Why, friend F., I can not quite see where blasted hopes come in, after all. It is true, you were annoyed by dry weather in May, when you would rather have had some rain; but dry weather hurts other folks as well as bee-keepers, does it not? So far as I can gather from your story, it is not the bees you are complaining of, but the weather, or circumstances, if you choose; and if you will excuse the liberty I take, I would suggest that perhaps a little fault may lie right at your own door. Suppose the wind did destroy three queens out of four; keep on trying. You can have another crop of queens in ten days, and where is there a farmer that can get his crop in that time? Try another ten days, and very likely the wind won't blow then. Have you not made the business pay expenses, in all these ten years? Surely you do not lose your bees in wintering away down where you are, as we do? Again, the season is not over yet. Suppose you did feed in June; have not hundreds of us done the same, and haven't we had our reward, too, as a general thing? Look up, friend F., and help your brother-in-law to look up too. High winds and droughts don't hurt any one, if his hopes are anchored where they should be. He whom the winds and waves obeyed is looking on, and knows it all; and he has said, even the very hairs of your head are all numbered.

Notes and Queries.

BEES WORKING ON LILAC.

DID you ever hear of bees working on lilac? Our Syrians have done so quite largely this spring. A. J. COOK.

Lansing, Mich., June 7, 1883.

[Honey from lilac! Who ever heard of the like before? Wouldn't honey be fine, and wouldn't it be fine to have a lilac orchard? Thank you, friend Cook. Has any one else noticed this? and is it a peculiarity of the Syrians only?]

What is paraffine? C. P. HOCKETT.

Jonesboro, Ind., May 24, 1883.

[A residue from petroleum.]

My bees are nearly all hybrids, and worse than the desperadoes and prize-fighters that our State is generally noted for. JOHN UMHOLS.

Nashville, Mo., May, 1883.

My wintering report in brief is as follows: Put in winter quarters, 135, and 21 "on shares." All came through, mostly in good condition; 3 or 4 queens were missing, or had run out of fertility. The bees were united, or made to rear cells. Sold, up to Mar. 1, 12. On hand May 1, 123, and 21 "on shares."

OLIVER FOSTER, 123.

Mt. Vernon, Ia., May 23, 1883.

A CAUTION TO NEW HANDS.

Charley Hunt's bees came all right, but he lost them in transferring them. The queen came out of the hive, and in looking for her she got stepped on, so he has had bad luck too. S. K. WILCOX.

Port Chester, N. Y., May 16, 1883.

THE FIFE PATENT HIVE; A CAUTION.

Friend Root, I think it would be best to warn people against being induced to give Mr. Fife any money. I do not believe that his hive is patented; and if it is, the hive is a worthless concern.

Nappanee, Ind., May 5, 1883. I. R. GOOD.

CUTTING A BEE-TREE.

I cut a bee-tree yesterday, and transferred them. In so doing, the queen got some bruised, but is still living. They are the pure Italians. They were in a tree nearly four feet through, about 45 feet high in the body. They had 20 lbs. of good honey.

A. L. MARTIN.

Leonardsburg, Del. Co., O., May 4, 1883.

HOW TO RAISE BASSWOODS FROM THE SEEDS.

I would say, plant seeds as soon as gathered, in late summer or fall. They lie over one year, and comes up the next spring, taking two years for seeds to sprout. An *expert* can make a success starting them from cuttings; but one must know how to make them root so as to pay.

Rantoul, Ill., Mar. 24, 1883. H. M. MORRIS.

A DISEASE OF THE BROOD THAT IS NOT FOUL BROOD.

I think my bees are affected with the same disease as Mr. Hewitts' (p. 256, May No.). They had it all last summer. I thought it might be foul brood; but they could raise queens *sometimes*, and did pretty well making honey; but they came through winter badly. I think I saw bees on exhibition at Michigan State Fair affected the same. L. C. LINCOLN.

Greenville, Mich., May 23, 1883.

"OLD FOGY" — HE VENTURES TO "PEEP" A LITTLE YET.

Bees are booming, but no swarms yet. I packed 27 colonies in chaff on their summer stands last fall, and all have come through the winter bright and lively. Does a swarm ever issue and go off without clustering? That is right, friend Root; bring on your score of witnesses, and let us have the matter settled. Yes, I read friend Cyula's letter, and from it I inferred that woods is not a good place to keep bees. OLD FOGY.

Allendale, Ill., May 7, 1883.

A QUEEN THAT DIDN'T LAY FOR 8 MONTHS AND 26 DAYS.

I want to know the reason of a queen not laying in 8 months and 26 days. Was it old age, or was she a Democratic queen that she would not lay with black Republicans? I want a Republican queen this time.

Mankata, Kan., May 14, 1883. DAVID ROSS.

[I am not versed in politics, friend R., and can't answer that part of it; but if I had a queen that didn't lay in one month, I think I should hustle her out of the hive, bag and baggage, and install a new housekeeper. I don't think I could give any reason; but I do know that we have queens once in a while that stop laying, and that can't be started by fresh brood and liberal feeding. I would not be in a hurry to discard queens in the fall of the year, however, for they often stop then, but commence all right in the spring. Of course, you gave the colony brood to keep up its strength all this time, and I think we can commend you as a patient man, to say the least.]

Our Homes.

Then Moses stood in the gate of the camp, and said, Who is on the Lord's side? let him come unto me. And all the sons of Levi gathered themselves together unto him.—EXODUS 32:26.

I HAVE talked to you so many times on the subject of temperance, friends, I presume I shall need to make no apology for taking up the subject once more today. The foe is a common one, I think, for I am pretty sure that in your native town as well as mine there are men who are braving an intelligent public opinion by keeping open dram-shops at this very minute while I write. They are doing this, too, when perhaps a great majority of the people all around them are strongly opposed to the business. In our town we have to-day a strong element in favor of education, intelligence, and Christianity; and numbers of good strong Christian men and women are laboring hard to bring up our youth in wisdom's ways; but although we have wealth and influence on our side, and almost all that one could desire, it would seem that, in spite of us, we have two saloons with open doors, doing a thriving business day and night. Drunken men and boys reel along the streets, and more men and boys come in streams from the country, as well as our town, and turn right directly into these saloons, to come out of them an hour or two afterward with black and bloated faces and leering eyes, to insult the intelligence of a civilized community. Who are the men who keep these saloons, and who continue on in this work? They are just about like those who keep the saloons in your town. They are uneducated, as well as unprincipled, and they ply their vocation day by day, of tearing down and sending to drunkards' graves the youth of our country, while the superintendent of our schools, with the best help our county affords, labors against the dangers of intemperance, and pleads with our boys to choose the straight and narrow path. The superintendent of our schools is a man of whom our county and State might well be proud. I very much dislike to speak ill of any of my neighbors, so I think I won't say any thing of the fellow who stands behind the bar. You can imagine the kind of a man he probably would be, to be engaged in that kind of work. And yet he is working against our free school institutions, and stands, day after day, blocking the way, and dealing out ruin, as if he had as good a right to do it as the schools and churches and Sabbath-schools have to lift humanity up to God. The saloon-keeper has no money, no influence, and no standing. I don't believe he is even making money. His predecessors have failed and became bankrupts. The work is no comfort to him, and no profit. Why does he persist in it? I really do not know, unless it is because the master whom he is serving is really in him.

About a year ago I asked the question at our teachers' meeting, whether we could not rid ourselves of this curse by getting together in a band of 500 strong, and marching down upon the fellow, telling him that we, as citizens of Medina County, in the name of God, and for the salvation of the youth of our county, demanded him to stop. Would it cause him to stop? To be sure, it would, said several. Some one suggested that fifty good solid citizens would close him up in a minute, if they should go to him that way, telling him they meant business. I know him well, and I am inclined to think he would be scared out, if only ten good men whom I can name would go to him in that way. The only trouble is, then, in getting the ten men to come up boldly, and declare themselves on the Lord's side, in the language of our opening text. I was strongly in favor of trying it in that way; but now God opens a better way for you and me and all to act. Bear in mind, while you consider it, that the penitentiary of the State of Ohio is overcrowded, and mostly with young men at that, and it is also admitted on all sides now, that whisky and saloons are the cause of by far the greater part of it. Now I will let friend Hasty tells where it is God calls, and how he has opened up the way.

FOR "OUR HOMES" DEPARTMENT.

Now that different bodies of ministers of different denominations have spoken out unanimously in favor of the prohibition amendment to the Ohio constitution, I venture to ask Our Homes to insert something on the subject. I want to set the subscribers who live in Ohio to doing something in the matter; and I think the subject will not be uninteresting to subscribers in other States. There need scarcely be a doubt that Ohio will prohibit the manufacture and sale of liquor this fall by at least 50,000 majority, if a wise and earnest canvass is made; and only think how many thousands of women and children, worse than widows and orphans, will shed tears of joy, and say, "I never hoped to see this day." Besides the direct good in the way of stopping drunkenness in our State, the moral effect of such a mighty breach in the center of the enemy's walls will be even more valuable. Ohio is the most influential State in the Union; let us put her in the van of a good cause.

This is nice and rose-colored, but there is an *if* in the way. *If* we can surmount the two great obstacles in the way, we shall see the rose-colored picture become a reality. The obstacles are, first, and worst, the jealousy between different bands of temperance folks; and second, the faint-heartedness caused by seeing so little good come from such numerous and long-continued efforts in the past.

Let us now look the worst difficulty in the face. It isn't wise to hide our heads under a leaf, like quails, and think the danger is obviated in that way. The great mass of the temperance folks in Ohio are members of the Republican and Democratic parties; but a band, perhaps a majority of the very active workers, have long maintained a party of their own, under the name of the Prohibition party. Unfortunately there is bitterness between these two bands. In the eyes of the latter, the former are mean hypocrites, who pray one way and always vote the contrary. In the eyes of the former, the Prohibition party has wantonly run itself as a political nuisance for the last ten years and more; is destitute of political common sense, and dead as Pharaoh's grandmother. As for them, they will have none of it. "And if this amendment is only the outcome of another plot to break up our party, we'll vote against it, notwithstanding we wish the making and sale of liquor to cease." Absurd as this last position is, thousands are thinking that way, and some speak their thoughts right out. Let there be a truce between us, brethren, until the amendment is adopted, seeing we all want that. We know that the man who wants a new party will continue to want it, and the man who detests third parties will continue to detest them; but let these feelings just rest in their little beds for a few months, until we give the common enemy such a drubbing as he never had before in his life. Don't throw away the only fighting chance we have had for a quarter of a century, in mere pettishness. Let every one who goes forth to labor for this amendment, first be sure he is sound on the catechism.

THE CATECHISM.

Is this a crusade against the Democratic party? No.

Is this a crusade against the Republican party? No.

Is this a scheme to build a third party, and cunningly use my vote to help on the project? No.

Is this a plan to squeeze the Prohibition party out of existence? No. The truth is, this is simply a battle to stop the sale of liquor. Other matters we will dispose of when we get to them.

After all, perhaps the best way to conquer jealousy is to get warm in the contest, and get rid of the faint-heartedness, which is the second obstacle. Friends, if you will do as we have been doing, I think you will cease to feel despondent. Immediately upon the submission of the amendment, I assigned six school-districts lying adjacent to our new church to different persons, to be canvassed, that we might find out what was the present opinion of each voter about the amendment. The first district to report panned out as follows: Total number of votes, 32; prohibition, 26; wouldn't say, 4; not seen, 2. I need hardly tell you, friends, that my faith in the people went up several hundred per cent about that time. Most of these men are not Christians, and many of them rarely come to our meetings. Two of the 26 are Germans, the only ones in the district. We are far too ready to set down all the German vote as sure for free liquor. Several of the 26 are men who drink too much themselves. We must by no means forget this section of our forces — the men who feel a personal need of prohibition, that they may be free from temptation which they fail to resist when presented to them.

Three other districts have reported since. One, which lies adjacent to the city of Toledo, and feels strongly the influence of city sentiment for high license, reported, prohibition, 6; license amendment, 17; all others, 6. This district was canvassed by a lady. Another lady brought this report of her district: Prohibition, 14; license amendment, 2; would not say, 2; not seen, 4. Another lady, not a *mother* in Israel, but a young lady, reported that she had seen personally every voter in her district. This is not so easy a matter to accomplish as one would think before trying it. The result was, prohibition, 11; license amendment, 11; free whisky, 2. I should delight to get at specimen districts in various sections of the State, and see more definitely how they stand; but I pretty strongly believe that those reported are no better than a fair average of the country districts of the State. If you will collate these figures you will see that, putting all other shades of sentiment together, and throwing in those who will not tell their intentions, and quite a number not seen at all, prohibition has a clear majority of seven over all — and this at the outset, before the campaign is fairly opened. Notice further, that of the mixed minority, three-fifths certainly, and probably more than two-thirds, are intending to do something for temperance by voting for the first amendment. We hope to make a great many converts from this class between now and fall. When they realize how little their plan will amount to, they will consent to go further and do more.

Now, can we not have the whole State canvassed in this thorough bit-by-bit sort of way? Will not the one who reads this go now and canvass his own (or her own) school-district, and see if the faint-heartedness does not get shaken out of himself in the process? Go in warm earnest; convince people that you have no sinister point to gain, but simply long to see the curse of whisky stayed; and then ask how many will help, to the extent of putting the word "Yes" on their ballots. Will not you, friend Root, let them send in the figures for publication in Our Homes? Political State committees have in this manner been able to tell very nearly what the vote of a State would be in important campaigns, before the votes were cast. It will be a burning shame, if the friends of temperance in Ohio are too indolent to do as much. In doing this work, a list of names and postoffice addresses should be made out, and those to whom campaign documents ought to be sent should be marked. This is one of the principal objects of the canvass, to find which voters are hopeful timber to make converts of. The list of addresses should be handed over to some working committee that will send the proper temperance documents.

Ohio's temperance fruit has been a long time on the tree; but it is the nature of fruit to mature slowly, and then drop suddenly. So mote it be. The struggles and prayers and arguments of many years have not been lost, although at times it seemed so; they have been ripening the popular sentiment, and it does seem as if the fruit were ready to drop now.

One frequent and terrible objection thrown up to us is, "Prohibition can not be enforced." It *can* be enforced. In pretty good measure it has been enforced. There is no room to dilate upon the matter this time; but the mightiest arrow of prohibition has not been shot yet; it is still in the quiver; and when the people get sufficiently aroused to shoot it, it will certainly bring down the enemy. E. E. HASTY.

Richards, O., June 13, 1883.

You will notice that friend Hasty says there are two great obstacles in the way. The worse of the two great obstacles is jealousy between the different bands of temperance folks. Is it really possible, that this thing has stood thus long, because Christian people could not agree? We are opposed to intemperance, and unite in one great body on this; but Satan, knowing we will quarrel before we get to work, stands grinning at us, and laughing to scorn our attempts to stop his work of ruin. Why do Christian people disagree and waste precious time, while precious souls are being lost, about trifling and unimportant matters? Two of the best men I know of in the world, regular old wheel-horses in all kinds of Christian work, once in talking in meeting about a fine new church that had just been built, almost got into a dispute, right before the congregation. What do you suppose was the point of disagreement? One said the church was all finished and paid for, and the other said it was *not* all finished and paid for. Any schoolboy might have readily gathered, from the statements made, that both were probably right, from their respective standpoints of view; but when we come down to the real point at issue, did any thing hinge on the fact as to whether one or the other was right? I can not see that any thing did. I never knew them to speak in that way before; and although they stopped very quickly of their own accord, it was a lesson to me, that the best of us are constantly in danger of being led by the wrong spirit, and that we can not pray too often for the influences of the Holy Spirit, which God has promised us as a free gift, if we ask for it aright.

What is it we need, then, to help us win the victory in this coming contest? Is it not the grace of God? Even in the Women's Christian Temperance Union I have intimations that there are sometimes faint symptoms of jarring and discord. Is it so, sisters? If it is, there needs to be more praying, and very likely the prayers should be mental ones to God for help, in the very hour and moment when you are tempted. Some of the richest blessings I have ever received were in answer to prayers that were sent up when my face was hot with suppressed irritation. I need hardly tell you, the irritation went down, and the spirit of the Savior rose up, and I came off victor over Satan. One who can do this, and always will do it, always comes off victorious. Show me the individual who prays honestly, earnestly, and hard, when temptation comes upon him, and I will show you an individual whom God will very soon use for his honor and his glory. Brothers and sisters, let us all pray for this Holy Spirit during this battle for temperance. I do not believe that "righteous indignation," as Christians are sometimes wont to term it, is very often wanted. I feel sure that God does not often want me to exhibit it. I know he does want me to show courage, and this is the second great thing we need, as friend Hasty has it.

To come right down close at home, in a few days we are to celebrate the Fourth of July, and I presume many of you who read these pages will take some part in this yearly anniversary of our nation's independence. In our town we have decided to have a celebration. A paper has been passed around to solicit funds for the purpose of defraying the expense of speakers, fireworks, public dinner, etc. One of our saloons subscribes $25, the other one $15. Of course, the saloons must be kept open on the Fourth of July. How could young America celebrate the Fourth of July without saloons? I by no means mean to intimate that we could not have a good, great, and glorious celebration without any thing to drink at all that did not intoxicate or exhilarate; but I was only thinking of past Fourths of July. In connection with the fact of our saloon-keepers subscribing so liberally, I may remark that one of them received three barrels of intoxicants (liquors, not beer, mind you). These three barrels were probably to be sold on the Fourth of July, even if they comply with the law so far as to permit no whisky to be drank on the premises. The three barrels will, probably, all of it be retailed out in little bottles. Boys who get patriotic (?) and reckless will get these little bottles full, go off in the woods or some outbuilding, and probably take their first drink on the Fourth of July. I feel terribly about this kind of work, because of the experience I have had with my boys. You remember my boy Albert whom I have told you about in times past. Well, he could get along very well until the Fourth of July or New Year's. Then he was sure to be treated and intoxicated. What a sad act is this on the day when our nation celebrates the anniversary of our independence!

Not very long ago, one of our citizens in passing home in the evening stumbled over some object on the sidewalk. He stooped down in order to see what it was, and received a volley of oaths and curses from the prostrate body. It was our old friend Albert! When the man found himself unable to get him up that he might take him home, he went back a little way, opened the door of one of our saloons, and said, "Here! some of your work lies out here in the street. Get him up and take him home, or he will be a dead body before morning." If I am correct, the saloon-keeper went and took care of him without a word.

You remember, too, of my telling you about one of our young men whom I found with his body across the railroad track, not far from our factory. This boy had one of these same little pint flasks of whisky in his pocket that he had bought at one of the saloons. They meet us at every turn. We find them along the sidewalks, thrown into hedges, out in the fields, in the woods, scattered about broadcast; and I presume they are scattered about just as thickly adjoining all the towns of this our United States of America — little flat glass bottles, something that can conveniently be put in the pocket. When I was in Cincinnati last fall at our convention, in a lunch-room at one of our large depots these little bottles of whisky were tastefully labeled, "Old Rye Whisky. Price 20 cts." I presume the usual price had been about an even quarter; but owing to the lively competition, and their anxiety to win favor with the boys, this enterprising lunch-room keeper had got the price down five cents. After I took my seat in the cars I found that the bottles did not all of them remain standing on the shelf, by any means. Boys in their teens took out their bottles, discussed the different brands, passed the bottles back and forth, as you might expect boys would.

My friends, do you wonder that our penitentiary is too small, and that it must be enlarged still more to accommodate the boys of our land? Do you ever have a Fourth-of-July celebration in your town? Do the saloon-keepers subscribe liberally? Will your boys probably be out late at night? Do they ever get on a strain of carrying on until they fail to consider the consequences of their boyish recklessness? Do we really want open saloons with little bottles of whisky temptingly displayed, throughout this fair land of ours? Is it not time, think you, to be up and to be doing? Suppose you read again friend Hasty's words.

Now read what my sister, Mrs. E. J. Gray, has to say in regard to the work of the Women's Christian Temperance Union:

It seems a little remarkable that friend Hasty struck upon a plan which has just been systematized, and earnestly recommended to the three hundred delegates assembled from all parts of our State in their annual convention held at Bellefontaine, June 20, 21, and 22. Blank books are already prepared, and can be procured, two for 5 cts., at the headquarters, Cleveland. Any one interested is requested to procure these books, which explain the method of work. We hope all readers of this article will feel that a responsibility rests upon them to do what they can in their own locality. Do not say it ought to be done and wait for some one else to do it. Yes, it is a great work that is before us, and but few, comparatively, are awake to the danger before us as a State. The peculiar manner in which the amendments are submitted seems to us to threaten a long step backward, should the first proposition carry and not the second. Do the people of Ohio want taxation and license of this horrible traffic? When their eyes are fully opened to the fallacy of this doctrine, they will say emphatically, *no!* It is for us who do see, to put forth every effort to influence voters to vote for the second proposition, and not for the first.

The Ohio W. C. T. U. will publish a weekly campaign paper called *The Prohibitory-Amendment Herald.* This paper will be sent to 40,000 voters free. Any person may send a list of names to headquarters of W. C. T. U., Y. M. C. A. Building, Cleveland, Ohio. It is specially requested that persons canvassing for names pledged to vote for prohibition should send the names of all doubtful voters, and this paper will be sent to them free. The first issue appears June 30.

If undaunted courage and persevering effort on the part of the Christian women of Ohio will, with God's help, carry this State for prohibition, it will be done. "Fear thou not, for I am with thee; be not dismayed, for I am thy God. I will strengthen thee. I will help thee. I will uphold thee with the right hand of my righteousness." God bless brother Hasty! E. J. GRAY.

Medina, June 26, 1883.

Then Moses stood in the gate of the camp, and said, Who is on the Lord's side? let him come unto me. And all the sons of Levi gathered themselves together unto him.

Tobacco Column.

I HAVE made up my mind to try to see if I can't give up tobacco. Understand that I will pay you for the smoker ten times double, if I ever use tobacco again, unless the doctor says so, if it should occur through sickness, and then I will pay the full price. Keep this letter till I die, so that you can show it any time. Send the smoker as soon as convenient, for I need it as soon as possible.

J. H. BAUERNFEIND.

Nerstrand, Rice Co., Minn., May 19, 1883.

I am compelled to have a smoker; a pipe makes me sick. Send by return mail.

THOS. C. DWYER.

Ronalsburg, Mecklenburg Co., N. C., May 10, 1883.

I have quit smoking and chewing tobacco. Please send me the smoker you say you will give for a present. L. P. SMITH.

Bartlett, Shelby Co., Tenn., May 22, 1883.

I have sent to our friend Muth several orders for your smokers. I use them every day, and when the smoke curls up I think what a delightful thing it is to have no "smell of tobacco" about it. You can count on me, beyond doubt. I never will use the weed. O. M. BLANTON.

Greenville, Miss., May 30, 1883.

MORE FROM FRIEND ROSS — SEE P. 201.

The smoker you sent to me I shall pay you for, as I feel the same about it as if I had stolen it. By the help of God, tobacco I never will use more.

Ibaton, Kan., Apr. 23, '83. DAVID ROSS.

Thank you; and may God bless you, my good friend, in following the promptings of his Spirit.

I have used my influence to introduce you and your goods, and to tell what you'll do for persons who quit tobacco. The following persons have quit: T. A. Gibson, Dr. M. W. Gibson, and Julius Rogers, all of Davidson College, Mecklenburg Co., N. C. The latter one says if you will send him a smoker, he'll quit for good; the two former say if they get smokers, and backslide, they will pay for them.

Triangle, N. C., May 14, 1883. C. S. LUCKEY.

Thank you, friend L. We send smokers to all, and put their names in print, as you see, so they won't forget their promises.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, JULY 1, 1883.

There shall not any man be able to stand before thee all the days of thy life: as I was with Moses, so I will be with thee: I will not fail thee, nor forsake thee.—JOSHUA 1:5.

TO-DAY, June 25, honey-extractors are being sent off at the rate of about 25 a day, and smokers at the rate of about 100 a day.

WE learn from friend D. A. Jones, that the time for the meeting of the N. A. B.-K. Convention has been fixed on the 18th, 19th, and 20th of Sept., 1883. Toronto, Canada, is the place.

MANY of the friends are wanting gloves larger than the limit of our regular goods, which run up to only No. 12. For these extra-large sizes, Nos. 13 and 14, we are obliged to use "driving gloves," as they are termed, and the price is $2.25, instead of $1.75, the price of the usual sizes.

WE are led to pause a minute, during the busy roar and whir of business, by the sudden intelligence of the death of friend Houck, who has, for a short time past, had charge of the *Bee-Keepers' Exchange.* The paper is now in charge of Colgrove & Ullery, but we have not yet learned who has charge of the supply business.

Once more, friends, the season has come around when dollar queens are one dollar apiece; funny, isn't it? but when we buy them we pay only 75 cents. For the last month we have been so fortunate as to be able to fill orders almost as soon as received; that is, the supply has been just equal to the demand.

We now have the American Express Co. at our station, instead of the old Union Express Co. which we have had here for so many years. This is good news for our patrons, as it does away with having express matter pass over more than one company, when you are located on the line of the American.

Big troubles are coming again, because the friends will not remember to put on the county, as well as the town they live in. I do not know but that we shall have to keep saying every month, "Put on your county," or we can not be responsible for the mistakes that may occur in directing. If it is too much trouble to do this, have your full address printed on all your stationery.

HONEY PEAS.

We have quite a trade in the honey peas, and have considerable many left yet. If sown in July they will produce honey just as well as if sown in June; but the peas may not be fully ripened for seed another year. However, since the honey will come in a time when most needed, perhaps it will be well to sow enough during this month to give them a good test at least. For prices, see page 361.

On another page we speak of apple-tree honey. The tumbler of it that our friend sent us was taken over to the house with a lot of other samples, and submitted to the family. All united in declaring it the finest honey they ever tasted, and far ahead of the other samples. Not only was the flavor beautifully suggestive of apple-tree blossoms, but it was so clear and limpid that one could read print through the tumbler, and yet it was so thick it would hardly run in hot weather. Will those who have any apple-tree honey to sell, send me sample with price they will take for it?

If you are too busy to keep a copy of the order you send us, please do be a little careful about censuring us for what you meant to order, but did not. A few days ago I thought I would send at once, without looking the matter up, every thing that people said was left out of their orders, and then look the matter up, after we got over the rush. Well, the first three or four complaints we got, it happened the clerks were in no way at fault, for the missing articles were never ordered at all! In some cases, the writers insisted on having the order back before they could believe they were so careless. Shall we not try again to be "slow to anger," and cultivate a little more the spirit that "thinketh no evil"?

BEES AND HUMANITY.

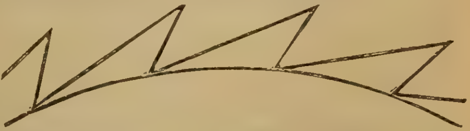
If you look through the glass of a densely populated observatory-hive during the height of the clover season, you will see so many bees hurrying to and fro, passing and repassing, crooking here and crooking there, with such eager zeal that you fall to wondering whether it be really possible that each individual bee knows what he wants, or what he is after. Well, that is just about the way our office looks now, say toward ten o'clock in the morning. Sometimes three or four will be apparently chasing one after the other; then they turn, one this way, another the other; then others come along, and they dodge, twist, turn, and crook; one grabs one thing, the other another. Some have both hands full of goods; others have an armful, and still another has letters and goods in his hands, and something in his mouth, so he won't forget or lose it. Girls come along with postal cards and letters pinned on their dresses; books are grabbed and pulled open, figures taken down, and books put back, and thus it goes until night begins to thin them off again. The saw-room below is almost a repetition of the scene above, only it is all sticks and lumber. The rooms below the saw-room, where wax, tin, and iron are handled, show the same activity again, and an outsider might think for the moment the whole building was a Babel of sprites and elves (there are 140 of us now) cutting up antics just for the fun of the thing. Does each one know what he is doing? Indeed he does, and I begin to think perhaps the bees are following a regular business, each one doing his own appointed work, knowing what he wants, and what he is after, just as we do. I look on and wonder, and the feeling is much the same in either case. As I continue to gaze, I seem to see God in his greatness and majesty through this, the work of his hands.

SAWS.

We have just received from the Industrial Publication Company, of New York, a very pretty little book, entitled "Saws," cloth bound, with 75 illustrations and 95 pages. The matter contained in it is, very much of it, quite valuable, especially to bee-keepers; for where is the bee-keeper who has not more or less to do with saws? I suppose, friends, you are well aware that a good man with a good saw will do more work in an hour than a good man with a bad saw will do in a half or even a whole day. It just occurs to me, however, that a good man would never have a bad saw; at least, a good man never *ought* to have a bad one. The price of this little book is $1.00, which, if I may be excused for the liberty I take, seems to me to be just about 50 cents too much. Perhaps I may be able to make some arrangement with the publishers whereby I can furnish them at a less price, if I take a large number. The closing paragraph of the book is as follows:

> There can be no doubt about there being too many teeth in the modern saw, as generally used, for ripping purposes; and I am satisfied, that if two-thirds of the teeth now employed were dispensed with, the same amount of work would be turned out with them as now, but with less labor, and the saws would be kept in better order at half the expense.

Now while we are on this subject, I want to remark that we have wasted perhaps many hundred dollars in labor by having our grooving saws for sections made with too many teeth. A few weeks ago Mr. Gray thought he would experiment a little in the matter, and the result is that one man now does our grooving easier than two men have done it formerly. All he did was to take out every other tooth in the saws, and make the under side of the tooth a little sharper pitch. While I think of it, I believe I will give you a little woodcut to show the shape and distance apart the teeth ought to be for gang-saws for dovetailing the end of basswood planks.



PROPER SHAPE OF SAW-TEETH FOR CUTTING IN THE END OF PLANK.

Now, not only will the sawyer do more work, but the man who files the saws says that, with teeth like the above, one filing will answer for all day, while with the old style of teeth the saws had to be filed about four times a day. Just think of it, friends, all this difference by just having a saw with the right kind of teeth! The ones we used before had about three teeth where you see one in the cut.

WE will pay 10 cents each for Feb. Nos. of GLEANINGS, 1883. Put your name on the wrapper when you send it."

THE clerk who hunts up complaints says, "When inquiring about goods, please state whether you ordered them by mail, freight, or express.

WE have to-day, June 28, 5595 subscribers, which is 32 less than we had a month ago, as you will recollect, about 450 having expired, who have failed to renew. Never mind; we shall have the 6000 yet before the year is out, if we have good luck and do not get discouraged.

PRACTICAL CARPENTRY is another work sent us by the Industrial Publication Co. Although the book is more intended for the building of houses than beehives, still it will be quite a valuable work for bee-keepers. Fully illustrated with nearly 300 engravings, with a beautiful set of plates in the back, illustrating the different methods of "jointing." Although the book is considerably larger than the one on saws, the price is still $1.00. We take pleasure in adding it to our book-list. Mailed on receipt of price as above.

THE FURTHER-ORDER BOX.

IN our office we have what is called the "Further-Order Box." All letters that must await further orders from the writers must be deposited here. Well, a few moments ago I was remonstrating at the number of letters that have accumulated there, and I singled out one large bundle, asking what it was. "Why, Mr. Root, we *could not* do any thing with these, for they are all letters with no names or addresses." There these have to lie, friends, until some one gets mad and gives us a regular blowing-up, and then he usually signs his name. But, only last week we got a big blowing-up from a man, and he did not sign his name then. So we had two letters from him that are still obliged to wait. Don't you begin to think that it would pay you to have your name and address printed on your stationery?

WHEN a man is striving earnestly to do right, he generally looks happy: when he deliberately does wrong, he almost invariably looks unhappy. If he does not look so, at least he feels so. Now, it would hardly do, I presume, to say that every man who looks cross and unhappy has a guilty conscience. But I think it would be true in a great many cases. A few times in my life I have had to do with men and women who had committed deliberate crimes. On looking back and thinking the matter over, it seems to me that these people, almost without exception, showed it in their faces and in their actions. Several times I was led to suspect the guilt, more from their looks and deportment than from any real knowledge in the case; and afterward, when the matter came out (for, you know, "murder *will* out"), I then remembered my impressions and my convictions. Now, friends, is it not so, that, among all the troubles one meets in this world, a guilty conscience is the worst trouble by far?

ENCOURAGING WORDS FROM "OUR CLEARING."

FEEDING, SWARMING, NEW HONEY, ETC.

WE begin the season with 35 colonies. We lost two in wintering — wintered on summer stands in chaff packing — and have sold 38. But you thought we intended to reduce our number to 10? Yes; but to change her mind is one of the inalienable rights of woman. Please do not ask which has contributed most to this result — the difficulty of finding purchasers without advertising, or the suggestions and expostulations of some of our bee-keeping friends. Perhaps it is due to these latter that we (even Nellie) accept the present situation quite cheerfully. It has, assuredly, given us much of grateful pleasure to know that, had we fallen out of the ranks, some of our comrades—and those not the least esteemed — would have missed us.

FEEDING THROUGH BAD WEATHER.

Two weeks ago we were feeding sugar syrup to 66 colonies, giving some only a taste — just enough to prevent destruction of brood — while others, entirely destitute, received full rations. Since our first summer in bee-keeping, 1872, when we found our one beloved colony starving in the middle of June, we had had no occasion to feed sugar syrup. Not that there have not been seasons of scarcity, but surplus combs of honey have always taken us safely and easily through. Bee-keepers to whom feeding is no novelty would have been amused at our consternation, as we faced the prospect of being obliged to maintain, on sugar syrup, 66 colonies, most of them strong in bees and brood, and tried to compute the expense per week, should the rain continue, or the raspberry-buds be blighted by frost.

Happily, our fears were not realized. The last feeding was on Sunday, June 10th. I dared not wait till Monday. It rained continuously; but I visited each colony, and made sure that no bee went supperless. On the afternoon of the next day, the first tiny pellets of raspberry pollen were brought in, and we banished all further anxiety. One week from the rainy Sabbath on which I last fed them, six swarms came out before church time.

A FORCE-PUMP FOR ARRESTING SWARMS.

A lady friend writes me this, apropos of her management of swarms. "I have a force-pump, and it seems as if I can drive them anywhere, and make them cluster just where I want them to, with it. I doubt my handling a swarm-catcher, alone, as easily as I can my little pump." This indorsement of the force-pump as a swarm-catcher may be to some of our sisters, as to myself, of special value, because made by a woman. She is one of the most intelligent, enthusiastic, and capable lady bee-keepers of whom I have knowledge; and that she finds the force-pump serviceable, and adapted to a woman's use, has weight sufficient to induce me to try it myself the present season. I have never seen one in use, but had fancied that it must be too awkward and cumbersome for a woman to manage — that it belonged rather to our brothers.

SWARMING-BASKETS, ETC., IN THE BACKGROUND.

Allow me to quote from the same friend's letter another paragraph which amused as much as it interested me, and which may seem a little startling to some of our sisters — those who are taking their first steps in bee culture, and still handle their pets rather timorously, and always at arms' length. "Mrs.

H.'s 'dish-pan' for carrying swarms isn't half as convenient as 'my big work-apron.' I always have it on in the bee-yard; it will hold half a bushel of bees, and has the advantage of being fast to me. I can let down one end of it, roll my bees in front of entrance, and by unpinning it and holding the binding over top of hive, have my pets all cooped up as nice as you please, with liberty to enter the hive at leisure, and shaded at that. Give me the apron every time for gathering a swarm from a currant or berry-bush!" Is not that an original and truly womanly method, brother bee-keepers?

For the past three days, honey has come in faster than at any time last season. Notwithstanding the cold backward spring, the dearth of honey two weeks since, and the continuance of quite too frequent showers, work in sections is considerably in advance of this date last year. And it has all been done within a week. CYULA LINSWIK.

June 23, 1883.

Thank you, friend Cyula. I know exactly how you and your sister felt when buying sugar to feed right in June. I well remember the time when it was almost with a guilty conscience that I went to the grocer's and bought sugar to feed my bees, barrel after barrel, and hearing my friends and neighbors say, "Why, that fellow Root has gone crazy. He has gone and bought a whole barrel of sugar, just to feed 'them bees,' and he will never get half of it back in the world." To tell the truth, I was almost afraid I wouldn't either. But I wintered the bees, almost to a colony, and the next season the neighbors were in a greater consternation than when I had to feed the sugar. But it was for another reason. "Who ever heard of such tons of honey?" said they. "And will he ever be able to sell it all?"—I am greatly interested about that force-pump. Are we to understand that it is something different from our fountain pump that we are selling so largely? or is it something that the friend you mention improvised herself?—Your idea of a big apron for a swarming-basket is wonderful; and when reading it I fell to wondering whether any of the bee-keepers of our sex would have the courage to use it, even were a big apron furnished them. After the bees began to climb toward his face, it seems to me he would be in considerable of a hurry to get those strings undone. Your friend must be a genius truly. Can we not have some more hints from her?

DOES ONE'S TREATMENT BY BEES DEPEND ON HIS BEHAVIOR?

BEES THAT WOULD FIGHT A STOVE-PIPE.

I AM glad to see by June GLEANINGS that W. A. Pryal has supplemented my correction of the naming of our white sage with an engraving that is readily recognized, the only trouble being that the inflorescence is not clearly represented. I have wondered many times where Prof. Cook got the sample which furnished the engraving in his book and in yours. The flower so carefully pictured there on a larger scale is as far removed from all relationship with the sage family as is the flax or the rose.

But, I write this to ask you if you are sure about your position that a person's manner among bees is the sole governing power in their conduct toward him. To prove that it is not, let me recite a case in point.

An inoffensive stove-pipe presumed to lift its somber head above the cabin near the city of bee-hives belonging to one of the apiaries of R. Wilkin, San Buenaventura, Cal. It was on its own soil. It never tried to rob. It had never harbored evil thoughts toward any creature. Whenever a man opened a hive of hybrid bees near by, did it act nervous and fidgetty? No, verily. It bore itself sedately and decorously as any elderly stove-pipe should. But, when the hive was opened, the bees danced the scalp-dance, sounded the war-whoop, etc. (see Virgil), and rushed headlong at the stove-pipe.

How did it behave itself then? I never saw it dodge its head. It did not beat the air. It did not prance nor swear (unlike a man), nor run away. It remained as rigidly motionless as a stoic. In fact, it was and is one. But still came the bees; and they battered and rattled against the stove-pipe's sinless head till it sounded like window-panes in a first-class hail-storm. They even crawled down its whole length into the stove. It was liable to be attacked at any hour of the day, whether fire was in the stove or not. If the former were the case, hosts of bees were killed inside the pipe. At such times the bees would likewise vent their rage on any person who came in sight. As a last resort, we made it a bee-veil of wire gauze; but I fear this was more for the sake of the bees than for the stove-pipe.

Moral.—If bees will try to sting a motionless stove-pipe, how can a person bear himself so quietly as to be safe from their attentions?

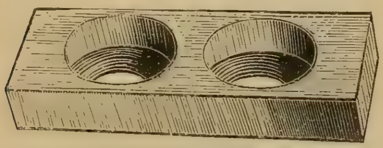
ANDREA NORTON.

Gonzales, Cal., June 13, 1883.

Friend N., "Aunt Mate," who is still opening the letters, has neatly penciled, at the close of your article, "pretty good," and I think I shall have to say the same. In fact, you have got me into a pretty tight place, and I don't know but that I ought to give up; but on the whole, I think I will try to hold my point a while, after all. I believe I shall take the ground now, that human intelligence has a power over the brute creation that a simple, inoffensive stove-pipe has not, and that there is often something in the bearing of an individual that makes a bee, a dog, or a horse, respect and fear him; or, in other words, his presence and manner impress them in a way that a stove-pipe does not, begging the pipe's pardon. Yesterday, while passing through the apiary, I saw a new hand opening a hive, and I felt sure she would get stung, just because she removed the enameled sheet from the frames with too little respect to the feelings, or, rather, *rights*, of the little people underneath. I don't get stung when opening hives, because I know better the habits and dispositions of the bees, and what they will bear with impunity, and what they will not. And further, give me a pupil who is docile, bright, and anxious to learn, and I will teach him to do it just as well as I do. Perhaps I might add, that I do not find one bee-keeper in a hundred who handles his bees as it seems to me they should be handled, and I think both time and money would be saved by humane management.

CANDY BLOCK FOR BEE-CAGES.

AFTER several experiments we have decided in favor of the little block shown below. It is just 4 inches long, and made to crowd in close in a Simplicity section. The block is 1½ inches wide by ¾ deep. Two holes are bored in it, 1¼ inches or a little larger. The small holes are ⅝. After the block is filled with the Good candy, it is fastened with wire nails in the section box — a block of candy on each side. Bees then have access to it through the small holes.

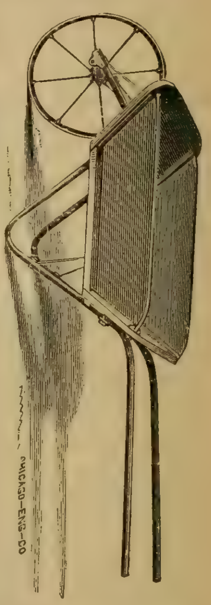


CANDY BLOCK FOR BEE-CAGES.

You will observe the block is made of such dimensions that the wire caps when squeezed down will not injure a bee. As there are two blocks in a section, the quantity of food is proportioned to the size of the cage. The cage for two sections will hold enough for ½ lb. of bees, while the cage for three sections will hold enough for a whole pound. When the candy is made of the powdered sugar, such as we have lately advised, there will be no trouble from the grains rattling out. In fact, it stays in the box in a pasty mass until the whole is consumed. We have had no loss this year so far, even when no water-bottles were used, with the exception of one lot that was carried past their destination. The bees then starved because they were over a week on the way. For trips longer than a week, perhaps it would be well to use water-bottles ; or the block could be made to hold more candy by putting the two holes a little further apart, and making a third hole between these two. Two openings for bees will probably be sufficient. It may be that during a severe drought this Good candy without water might not answer the purpose so well. The season thus far has been unusually wet. In fact, there has been more or less rain on almost every day. We can furnish these blocks for 2 cts. each ; 18 cents for 10, or $1.50 per 100. One cent each, additional, if wanted by mail.

A WHEELBARROW FOR BEE-KEEPERS.

ALMOST every bee-keeper needs a wheelbarrow of some kind. Even though a wagon-road be so arranged as to come close up to the hives, still there will be more or less work to be done by laborious carrying back and forth, unless it be moved with a wheelbarrow. As the "Bee-keeper's wheelbarrow" is liable to be left out in the weather, it is quite desirable that it should be made so as to stand both the sun and the rain. The one we illustrate below is well calculated for this purpose. The bottom-board is flat, so as to hold a hive or hives safely and securely. It is rather broad ; and with the back and front boards, quite a load may be carried, even of bulky articles. It facilitates the moving of long stuff as well as lumber or scantling. These side-boards can be quickly removed. Furthermore, if the woodwork gets broken, or spoiled by use, any one who can handle a saw and plane can make new ones. Below is the manufacturers' description of them :



THE BEE-KEEPER'S WHEELBARROW WITH SIDEBOARDS IN PLACE.

The body being a combination of the railroad and garden barrow, is adapted to a larger variety of uses than any other make. Used with side-boards it has a large capacity for holding dirt, rubbish, manure, apples, potatoes, coal, garden truck, etc. With side-boards out, the bottom of the body being flat, makes it handy for hauling boards, posts, tool chests, boxes, cord wood, and a variety of things not requiring side-boards. The bodies are made of straight—not "bent lumber;" can be easily repaired by any one in case of breakage, and are very strong, being made of 1-inch lumber, dressed, and having four strips across the bottom to increase strength, and is very roomy.

The handles, legs, and part the wheel is attached to, are made of extra heavy gas-pipe, 1 1-6 in. outside, all in one continuous piece, making it strong.

No joints for rain and sun to rack and rot. Is practically indestructible; no wear out, as is the case with the wood handles and legs, which soon rot and go to wreck.

The legs being curved where they strike the ground, will slide along if dropped while in motion, instead of catching in the ground and breaking or straining the barrow, as is the case with other makes.

The wheel is iron, 17 in. high, and has a broad tread, 1¾ inch, making it desirable on soft ground, as it will not sink in.

The entire barrow is well painted, and altogether makes the Leader the best wheelbarrow for general use. Will outwear a dozen cheap ones.

Is light to handle, weighing only 50 pounds. In shipping, they are sent "knocked down;" the bodies nest, and the legs and braces tied together.

The regular retail price of these wheelbarrows is $5.00 each. We have made arrangements for buying them in quantities, whereby we shall be able to ship to our bee-friends for $4.00 each. They can be sent by express or freight. Printed directions accompany for putting them up. If sent with hives or other goods, the freight will be only a small item. We have one in constant use, and are much pleased with it.

ON HAND,

A limited number of CHOICE TESTED QUEENS. Price $1.50.
L. W. VANKIRK.
7tfd WASHINGTON, Wash. Co., Penn.

BEE-HIVES FOR SALE!

I manufacture every thing needed by bee-keepers, made of wood, not patented. I make Simplicity and Langstroth hives a specialty. My work is as good as the best, and my prices always please my customers. Send postal card for my illustrated catalogue.
4tfd H. F. SHADBOLT,
WINOOSKI, - - SHEBOYGAN CO., - - WISCONSIN.

The American Apiculturist

Is a First-Class 32-Page Monthly,

DEVOTED TO BEE-KEEPERS AND THEIR INTERESTS.

It is edited and published by a practical bee-keeper, and its list of contributors is composed of the most scientific and practical apiarists in the country. It is indorsed by our leading bee-masters.

The July number will contain the description and history of the Bay-State Apiary, from which has emanated Alley's new method of queen-rearing, as given in the "Handy Book," together with excellent photographs, both of Mr. Alley and his apiary.

Send in your subscription for at least three months, and secure this number, which is sent only to subscribers. Sample copies free. Our offers to subscribers are unparalleled.

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SILAS M. LOCKE, Editor and Publisher,
7d SALEM, Essex Co., Mass.

Headquarters IN THE South,

FOR THE SALE AND MANUFACTURE OF

BEE-KEEPERS' SUPPLIES.

Root's Simplicity, and V. D.-N. hives, frames, sections, foundation, etc.; Italian queens and early 4-frame nuclei a specialty. See advertisement in January, 1883, GLEANINGS; and for further particulars, send for my Illustrated Catalogue.

25 cents cash, or 27 cents trade paid for beeswax.

P. L. VIALLON,
7tfd BAYOU GOULA, La.

E. T. LEWIS & CO., TOLEDO, OHIO,
Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 1tfd

PATENT FDN. MILLS. 6-inch, $10.00. 10-inch, $15.00.
2tfd WM. C. PELHAM, Maysville, Ky.

GLASS JARS

SPECIALLY MANUFACTURED FOR EXTRACTED HONEY.

White flint, best quality and good shape to hold 1 lb., per gross (12 doz.)	$4 00
" " 2 " " " "	5 50
Second quality; very pale green; extra showy; 1 lb., per gross,	3 50
" 2 " " "	4 00

Free on ship, in 100-gross lots.

Perforated zinc queen-excluder, per foot, in 1000-ft. lots,	4c

THOS. EDEY & SON,
7tfd **St. Neots, England.**

MORE REDUCTION

IN THE PRICE OF

COMB FOUNDATION!

We have about 1500 pounds of very nice thin fdn. that we will sell at 50c per lb., if ordered in 10 and 25 lb. boxes. We do this to close out our stock before the honey season begins.

C. W. STANLEY & BRO.
Wyoming, Wy. Co., N. Y., July 1, 1883. 7d

W. Z. HUTCHINSON

Rogersville, Genesee Co., Mich.,

makes a specialty of rearing dark, leather-colored Italian queens. Untested queens, $1.00 each, or six for $5.50; twelve for $10.00. Tested queens, $2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 7tfd

CHANGE OF POSTOFFICE!

S. C. & J. P. WATTS' OFFICE NOW IS
MURRAY (*Formerly Lumber City*) CLEARFIELD CO., PA.

THE BAVARIAN APIARY

During a recent tour through Carniola, Austria, I made special arrangements whereby I now receive regular shipments of

CHOICE CARNIOLAN QUEENS.

Carniolan bees are large, strong, and, to my eye, not devoid of beauty, being light gray in color. They are the most peaceable bees I have ever handled; and even beginners in bee culture will find no difficulty in manipulating them without smoke, and without protection to the face or hands. The queens of this race show marked prolificness, and only choice specimens will be sent out. I have also special contracts whereby I am supplied with

EXTRA FINE ITALIANS,

Reared in those Alpine regions where I have found the bees to be the most vigorous and prolific. The workers of these queens are as finely marked as any Italians in existence.

One queen in June or July,	$4 50	After Aug. 1st	$4 00
Five queens in " " "	4 05 each.	" " "	3 60 each.
Ten " " " " "	3 60 each.	" " "	3 30 each.

Freight prepaid to New York City. Queens that fail to reach the purchaser alive will be replaced.

7 8d **FRANK BENTON, No. 4 Georgen St., Munich, Germany.**

QUEENS! BRED FOR BEAUTY AND FOR BUSINESS. QUEENS!

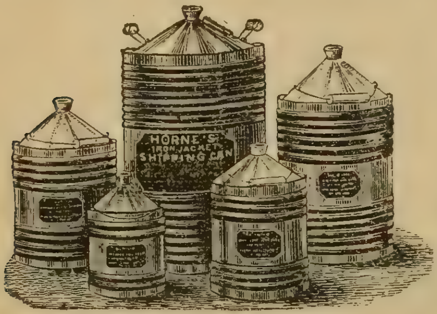
CHOICE STOCK. LOW PRICES. CIRCULAR FREE.
7tfd **E. A. Thomas & Co.**, COLERAINE, MASS.

$4.00 ONE HUNDRED COLONIES BEES. $4.00

As our store demands all our time, we have decided to close out our apiary at $4.00 per colony. Will extract most of honey, and commence shipping about 1st of August. Bees in my double-wall hive, size of frame 14x12, with side and top storage for 75 lbs. honey; also 25 3-comb nuclei, double-wall, takes hive frame, at $2.00 each. Orders booked and filled in rotation. Send by Reg. letter. Address

7d **J. E. MOORE, Byron, Gen. Co., N. Y.**

SHIPPING-CANS For HONEY.



"Iron-Jacket" Honey-Cans.

I presume the friends are aware that ordinary tin cans are not very safe for shipping full of honey, unless boxed or crated. The cans above are ready to be shipped anywhere.

PRICES.

1 Gallon,	$0.25 each.
2 "	.38 "
3 "	.47 "
5 "	.68 "
10 "	1.10 "

By figuring 11 lbs. of honey to the gallon, you can easily see how many pounds each can holds. They are made from tin plates. A sheet-iron casing, with wood bottom, protects them from bruising. The iron jacket is stronger than wood, and far more serviceable. They neither shrink nor swell, and do not split nor fall apart. Every can is tested by steam and guaranteed to be tight.

A. I. ROOT, Medina, O.

ITALIAN & HOLY-LAND QUEENS.

The handsomest queens for business the world produces.

BUSINESS, BEAUTY, AND WINTERING QUALITIES COMBINED.

We challenge the world to equal them!

Every queen warranted perfect. Tested queens, $2.00 each. Handy Book and queen, $2.50; queens warranted as good as tested, and Handy Book, $2 25. Special rates by the dozen. Send for 32-page circular.

HENRY ALLEY,
7d **Wenham, Mass.**

WHY NOT
BUY YOUR QUEENS
DIRECT FROM THE BREEDER?

TWENTY-FIVE CENTS SAVED IS TWENTY-FIVE CENTS MADE.

After the first day of July I shall be prepared to send out from 10 to 15 dozen untested Italian queens (reared from imported mothers) per week, for the small sum of $1 50 per half-dozen, or $8.00 per dozen.

Address **W. S. CAUTHEN,**
7d **Pleasant Hill, Lancaster Co., S. C.**

E. T. LEWIS & CO., TOLEDO, OHIO,

Manufacturers of the U. S. Standard Honey-Extractor (new improvements), and all other Apiarian supplies. Send for circular. 1tfd

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GEORGIA AHEAD. Stocks for Apiaries, Silk-Farms, etc., cheap as any *reliable* parties.
7d CHAS. R. MITCHELL, Hawkinsville, Ga.

ITALIAN BEES
BRED FOR BUSINESS.

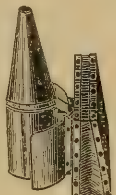
PRICES:

Warranted queens, each, $1.00; per half doz. $5.50; per doz., $10.00. Tested queens, each, $2.00. Three-frame nucleus and warranted queen, $3 00.

Full colonies for sale at a bargain.

The combs are all in the Langstroth frame, wire-strengthened. Safe arrival and perfect satisfaction guaranteed. See advertisement in May GLEANINGS. Circulars free. Address

7tfd J. P. MOORE, Morgan, Pendleton Co., Ky.



FOR THE

OLD RELIABLE

BEE-SMOKERS

or Uncapping - Knives,

Send card for circular to

BINGHAM & HETHERINGTON,
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Borodino, N. Y., Aug. 15, 1882.

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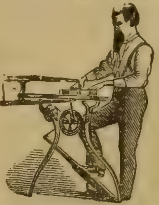

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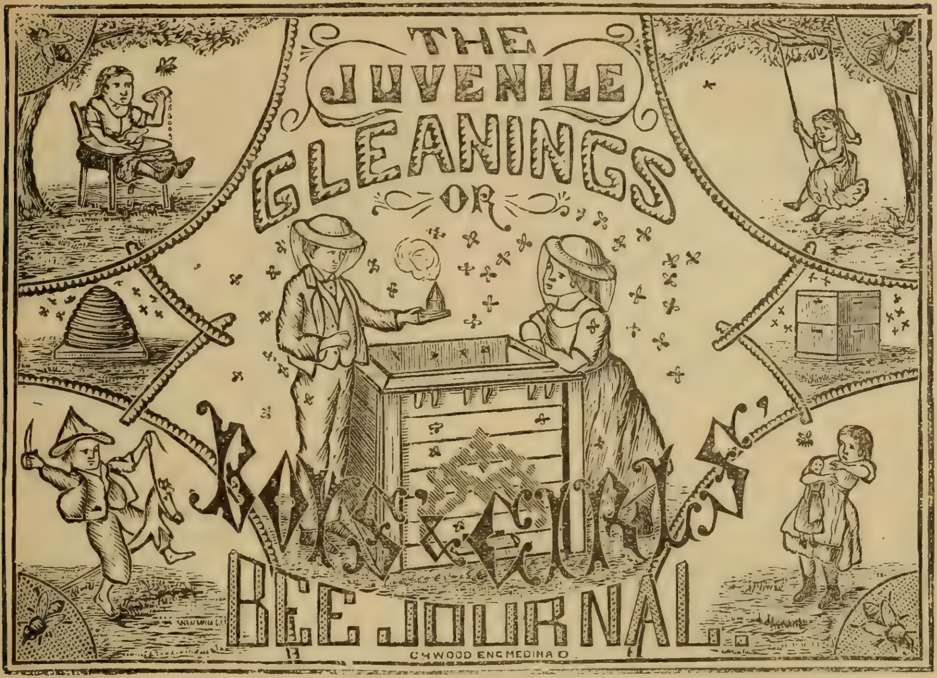


He that is faithful in that which is least, is faithful also in much.—LUKE 16. 10.

PUBLISHED BY A. I. ROOT, MEDINA, OHIO.

Vol. II. JULY, 1883. No. 4.

MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10: 29.

And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul.—GEN. 2: 7.

DEAR CHILDREN, I have a new topic to talk to you about to-day. I have no idea that this topic will be as interesting to you as to me; and I am not quite certain, either, whether it properly belongs under the department of "My Neighbors," although it surely comes very near indeed to that part of it included in the term "Myself." What do you suppose it is I am going to talk about? Well, it is the new baby over at our house. He is now just about six weeks old; and if I were sure it would be as interesting to you as to me, I might fill this whole JUVENILE in telling you about his funny ways and habits, although he is only six weeks old, or a little more. Have any of you got a six-weeks-old baby at your house? I will try to tell you one reason why my thoughts center so much on him. I used to teach school once; and when I got through teaching that school, some way I took to teaching boys and girls in general. and have been doing it almost ever since. One of the most interesting things to me in this world of ours is the problem of human life, and especially human intelligence. Every day of my life I am teaching somebody something, and every day of my life I am watching anxiously, and I hope prayerfully, the unfolding of intelligence and ability and skill in those about me. I am obliged to study the money value of these friends whom I meet, because I pay them wages, and the amount of wages they receive is in proportion to the amount of intelligence and ability that they manifest to make themselves helpful to other people. One of the great wants in this world is the ability to make our wants known to others, and also to minister to the wants of others. For instance, a hundred or so of people are coming to us every day, telling what they want; and their letters expressing these wants are turned over, directly or indirectly, to a hundred or more boys and girls, to wait on these people who come to us. Now, the great thing needful is, that we may understand each other — that we may convey the thoughts of our hearts to the thoughts in their hearts. To do this we have a language, and talk. Is it not funny that we can talk to each other? Well, friends that are a great way off can not talk so far; it would make them hoarse, you see, to shout to us away across the Rocky Mountains or across the vast oceans; therefore they write letters. Now, while some of them write real nice plain letters, and tell what they want plainly and clearly, others make horrid work of it. Yes, they make even worse work of it than you children do, for I can read the worst letters from children that have ever been sent us, a great deal easier than I can some of the letters of grown-up people. Not only that, the grown-up people often tell half that they want, or even less, while most of the children tell it out plain, sometimes two or three times over. Is it not queer that we now talk to each other all over the world, and understand each other, too, pretty well at least?

I have told you before that when a great deal has to be written, we have methods of writing that are shorter and quicker than the way you write. What I am saying to you now is taken down in this same shorthand we have been talking about; and, by the way, I might tell you that we now have in our factory here two shorthand writers and two type-writers — all these as a means of communicating intelligence rapidly and surely from one to the other.

Well, now, we have had all this talk, and not a word about the baby. What do you think it has got to do with the baby? Well, just this: I have been talking about the growth of human intelligence; and it has been a wonderful study to me to study the growth and unfolding and development, as it were, of intelligence in this boy-baby of ours. I was wonderfully curious when he first began to manifest the intelligence that stamps humanity so far above any of the animal kingdom. When he was a week old, or about that, I was sure that he showed intelligence enough to give us one of those wonderful baby-smiles. He did not laugh out loud, of course, and I do not suppose you could call it a laugh at all. But there was a queer turn to the corners of his little mouth, and a sparkle in those soft blue eyes that told to me unmistakably that he recognized his friends, and that he began to realize how much he was loved and thought of in that home of ours. It seemed to me as if it were almost a bright revelation from God's own mind, sent to us to tell us again of his wondrous love for his children. In a week more, the baby began to show funny little ways, and soon he became capable of being taught little tricks, as it were. Perhaps if I should tell you about them, many of you would laugh, and say it was only my imagination, or that all babies do so; and perhaps some of the matrons that read JUVENILE GLEANINGS may say knowingly that it was only the effect of wind on his little stomach, and that a baby three or four weeks old has not a "speck" of sense. We know better, don't we, little friends? Babies do know, and babies do think, and babies do learn, even if they are not a month old yet Have you any idea how much of a comfort that baby is to me? I tell you, my little friends, I get very tired some of these days, and when I go home and get his precious soft little self in my arms, and just put my face right down under his dimpled little chin, and talk to him, and make him smile, why! it rests me more than any thing else in this world. Even when he is sound asleep I could sit and look at him by the hour. And I would think, too, by myself, that the world might go here and there after pleasures and beauty; but as for me, there is nothing in this whole wide world so handsome and so beautiful and so pleasing to the eye as "our baby." Perhaps some of you have read "The Christian's Secret of a Happy Life." Well, our good friend who writes this book says in one place, in speaking of the baby of the household, "He toils not, neither does he spin; yet who in all that household is loved and fondled and caressed like that baby?" You see, he has no merit of his own; he is no help about the work of the household; and, by the way, my wife says that, even if he does not toil nor spin, the one who takes care of him does both toil and spin at times in very good earnest. Why do we love him? Is it not because God sent him?

May I tell you just one little trick of his which he has learned within a few days? I might add, he is not by any means one of the *best* babies in the world. He can cry right lustily, I tell you; and sometimes when they want to put him in the crib, and he does not want to go there, he will curl himself backward, standing on his head and heels, and manifesting his protest at being put to bed, in a way that might almost raise the roof of the house if it were not a heavy roof of slate, and securely fastened down. Now, children, I am afraid that is a pretty big story for your Uncle Amos to tell; but I could not think of any other way of expressing the power of baby's lungs, and his vehemence, when he wants to do something you do not want to have him do. Well, now, when I come home, thinking what fun it will be to just get hold of his precious little self (even though his rosy little lips do drool on my coat-sleeves now and then), no matter how hard he may be crying when I get him, he is pretty sure to be good; and after I have talked to him and told him stories, you know, and pinched his fat, chubby legs, and given him four or five big kisses, he will get so good-natured that, with a little provocation, I can make him laugh right out loud — at least, I call it laughing out loud. You see, I just give him a touch on his dimpled chin, and then on his rosy lips, and then on his little pug nose, and he begins to smile with so big a smile that his little mouth is stretched almost to its widest capacity. Then when he can't smile any "wider," he will usually throw himself back, and give a sort of "coo," expressing his relish for the fun.

About this time his mother begins to scold to see how he carries on before I come, and then turn around, all smiles and good nature when I get home! Now, when friends come in to see him, and smile at the idea of a six-weeks-old baby laughing out loud, I just take him and go through with the whole performance, and then you see they have to give up.

Do you want to know what his name is? Well, my name for him is "Peter." When they ask me why I call him Peter, the only reply I can give is, that he looks just as if his name ought to be Peter; and although all the rest of the household scold about it, and declare it shall not be Peter, Peter it is, and has been so far.

Now, little friends, you know all about Peter. And this is not a made-up story either. Don't you kind o' like real, true stories?

VIRGIL'S TREATISE ON BEES.

Concluded.

THE PROPER WORK FOR BEES OF DIFFERENT AGES.

THEIR city's walls to elders are the care,
To cap the combs, and cunning work prepare;(1)
The younger wearied come at evening time
With legs full packed with pollen from the thyme:
They pasture the arbutus by the way,
The smiling crocus, and the willows gray;
The rich, fat linden, and the cassia too,
And hyacinths with red and rusty hue.

HABITS OF LABOR.

To all one rest from toil, one work to all,
Forth from the gates they rush at morning's call. (2)
Delay is nowhere; but when vesper tells
To cease from pasture o'er the plains and dells,
Then seek they to the sheltering roofs of home,
Their bodies then refresh beneath its dome;
A sound is heard, they fan with murmuring roar
On 'lighting-board and threshold of the door. (3)
When now to seek their chambers it is best,
In later night the sounds are stilled to rest; (4)
Their members, wearied while in fields they strolled,
Their own sweet rest doth for a season hold. (5)

BEES BEFORE AND DURING STORMS.

Not far, indeed, they venture o'er the plain
To leave their homes when waits impending rain,
Nor with implicit faith believe the sky
When fierce east winds in stealth are drawing nigh;
But, safe from storms, beneath their city's walls,
Bring water simply when occasion calls. (6)
Some little flights round home anon they try,
And pebbles oft they carry when they fly; (7)
As little boats their needful ballast crave,
Unstable else before the tossing wave,
But, with their pebbles, steady as a scale
They bear themselves straight through the harmless
gale.

(1) If this is not the way it is, we will play it is the way it ought to be. Let the old folks tinker up things and "potter around" at home, finding time to tell a story once in a while about times when they were young; and let the brawny young chaps "skirmish" for honey and pollen. But if the exact facts are sought for, why, then, I suppose the aged bees are a good deal like the old man of Cilicia, braver and more industrious to the last. I believe authorities now hold that the oldest bees work almost wholly in the fields, and keep at it till they fall and perish, the wearing-out of the wings being often the cause of the final disaster. But I for one would not be surprised to hear it proved, some time or other, that the sentinels, and those that do the more difficult work with propolis, are really aged bees.

(2) I'm thinking of that hive of black bees friend Root had a few years ago. They found out he had a patch of spider plant (which secretes honey only in the night), and that by getting out before it was fairly light they could get a lion's share of it. If they waited a little they would have to divide with a hundred or more colonies, and so they slept with one little deaf ear open, and heard "morning's call" a little beforehand, and "rushed forth from the gates" when it was so dark that friend R. had to get down on his knees to be sure they were actually coming out to work.

(3) The usual minute accuracy of Virgil comes to the front again here. It is not the common buzzing about the doorway that is meant in this place, but the curious, steady, muffled roar which commences at nightfall of each day when a fine lot of nectar has been gathered in. The roar continues until enough water is evaporated from the new honey, or enough so they decide it will do for the present. Honey just as it comes from the flower would very quickly spoil if they did not "cook it down." They don't put the thin honey in the cells and then blow on it like little boys blowing a plate of hot soup, as some folks seem to get the idea. They know a trick worth two of that. Their own bodies are full of air-tubes, and they *evaporate the water out of themselves*, and, holding the thin honey in their honey-sacs, the surplus water filters through the walls of the sac and takes the place of that which was evaporated out of their blood by the fanning. They also keep the tube of their ligula, or trunk, full of thin honey during the process, and press it out till a tiny drop hangs on the end. They are careful not to let it fall off. They keep pressing it out and drawing it in again as they keep up the fanning. In fanning they all stand with their heads one way, and move their wings gently. A rapid current of air is thus produced that takes away moisture very rapidly.

(4) In our country I believe the bees sometimes have to fan all night to finish up their job; but probably this scarcely ever happens in Italy, where Virgil lived. The daily runs of honey are small in Italy, and as a natural result the bees would get the honey "done" long before morning.

(5) This is not far from the exact truth. Ancient investigators seemed inclined to go too far in speaking of bees resting, and moderns are inclined to go too far the other way in denying that bees ever rest at all. Truth lies somewhere between the two. Bees have absolute need of but very little rest—much less than animals.

(6) The need of water seems to be one of the most imperative of all their needs. Without water, their babies would suffer greatly, if not die outright; consequently they go for that in very bad or threatening weather, when nothing else is carried.

(7) It seems too bad to explode this pretty tale of sagacity; but I'm "afeered" it will not stand the test of modern research. The facts out of which the mistake seems to have arisen are interesting, and not at all discreditable to Virgil and other ancient observers. In cold windy weather in the spring of the year, some hardy old bees will not keep quiet, but insist on searching the country to see what they can find. And what can be found at such times? Almost absolutely nothing, except old propolis sticking to empty hives and disused fixtures. Various substances are made to do duty as propolis at times, and the stuff may be almost any shade of red or brown, or even black. Nipping and prying away at this stuff, the resolute old chaps break off large irregular chunks of it. It is so hard with cold that they can not make it into rounded pellets as usual; but they manage somehow to fasten it on in the usual place of carrying pollen-balls, and home they go with it. Ancient scientists seem to have jumped at the conclusion that these black-looking, angular fragments were pebbles, carried for ballast.

Very many thanks for the kind and complimentary way this translation and commentary is received. And as for having it in book form some day, we'll see what we shall see. E. E. HASTY.

Richards, O., July 9, 1883.

Friend Hasty, I came pretty near jumping up and swinging my hat when I read your No. 3; but after a little while I was glad I didn't. May be you are right, though, after all. I am sure you are partially right about bees "cooking down" the raw honey. You know we have had a good deal of speculation about this subject. If I recollect correctly, friend Doolittle, or some one else, suggested that the bees "sort of" "churned" the water out of the honey in homeward flights from the flowers. Now, this idea, which I believe is mostly yours, that bees use their breathing-tubes for evaporating the honey as well as getting the breath of life, I do not know that I have ever heard of before, or ever thought of it; but since you suggest it, I believe you are right. I am sure they hold the honey out on their tongue, and blow it, for I had decided on this long ago; and now I should accept your explanation, every bit of it, were it not for the fact I mention in the A B C, under the head of "Water for Bees," page 260, where I speak of the bees gathering thin watery honey from the figwort, and expelling the watery portion as they start to fly home. Last fall, when they were at work heavily on the gray buckwheat, by stationing myself on one side of the field, the clear water which they threw off as they started for home, heavily laden, was so great that it almost made a small shower. I have collected this watery matter in clean plates, and tasted it, and it is pure water, and nothing else. They throw it off while on the wing; and I presume careful observation will show that it is thrown off in this way when they start for home, no matter what kind of blossoms they are working on.—Once more I congratulate you on the skill with which you have unfolded and explained VIRGIL.

OUR JUVENILES AWAY OFF IN AUSTRALIA.

A LETTER FROM ONE OF THE JUVENILES.

AS papa is writing to thank you for GLEANINGS and catalogue, I desire to thank you for JUVENILE GLEANINGS, which very much interested us. My brother Ernest and I wish we were able to get it every month. We have been keeping bees these last two years. Ernest and I have had a good deal to do with them in the way of hiving and driving them from one box to another, in order to get the honey. We feel very anxious to know more about the modern system of managing bees. We hope, after receiving your A B C, we sahll be able to manage bees much better than we can now. Last year papa made 5 frame hives, which are a great improvement on the boxes; but not knowing how to make them properly, the bees build their comb too thick, and also fasten the frame fast to the box, and we have much difficulty in getting the first frame out, and often make a muss in so doing. Last year was a very bad year for bees, and we lost half of them. This is a very much better one so far. This fall crop bids fair to be a good one, on account of gum-trees (*Eucalyptus globulus*) flowering this year.

TREES 300 FEET HIGH.

The gum-tree is one of our most useful and largest trees for all kinds of sawed and split timber. Many of them grow to the great height of 250 to 300 ft., many of them measuring 30 ft. in circumference at the butt. We have many flowering trees which afford forage for the bees. The wattle-tree flowers in spring (September), about as soon as the willow and peach trees. Many other trees continue to flower up to our first fall month (March), then our noble gum-tree comes into flower. In some of the warmer parts of our colony, bees can get a little pollen and honey nearly all winter, and need little or no attention. They are left standing out anywhere in old boxes, without any cover, or any thing but water. Right in some parts of the woods there are great numbers of bees in hollow trees; and when cut down, people get a great many pails full of honey.

KANGAROOS.

We who live on the opposite side of the world from you have a great many things that would be curious and interesting to you; viz., the kangaroo, which carries its young in a bag, or pouch; a great many thousands of them are in many parts of our colonies, and when closely pursued by man and dogs they will often throw out their young ones, that they may escape. The "old man" kangaroo often stands about 5 or 6 ft. high, and are very dangerous to man and dogs, seizing them with their little fore-feet. They will rip them to pieces with their hind great toe, and if there be water near by they will carry them to it and hold them under until they are drowned. If any one can manage to cut their big tail off they will tumble over and lie perfectly helpless, it being their balancing-pole, which is 5 or 6 inches through, and makes capital soup.

WILD-CHERRY TREE.

I think it is about time to cut my narrative short, or you will think I am very voluble. So I will only mention one thing more — our wild-cherry trees. It has a beautiful shape; its foliage is like that of the pine, and seldom attains the height of 15 feet. Its fruit is about the size of currants, more the shape of grain, or wheat; instead of the stone being on the inside, it is on the outside, the opposite end from the stem.

Ernest and I wish we lived near you, that we might see you and your factory, where you make all the implements for the apiary, which would delight us very much. How big is that wheelbarrow of yours that is always full of books, and running over? If there were any thing about bee culture in it, and were passing our place, we would be sure to pick up all those that tumbled off. We can get all kinds of books here, and we have many good ones too, but nothing treating on modern bee culture. The JUVENILE we soon devoured, and wish we could get it every month. We can not learn from it what the price would be for 12 months. Please let us know how much it would be, and the best way to send the money to you. NORMAN T. LOUKES, age 14.

Daylesford, Victoria, Australia, March 11, 1883.

May God bless you for your little letter, and the sample bee you sent, my young friend. We send a book from the wheelbarrow full, and GLEANINGS a year for your letter. The JUVENILE is a part of the other, and is never sent separate. The price, $1.00, covers both. We are all very much interested in your account of those great gum-trees, as well as your interesting account of the kangaroo. It sounds different from reading accounts of these things in books, because we have a real live letter right straight from you in your far-off home. I am sure we shall all be very glad to hear from you again. I wonder if your people have developed your honey resources as well as we have here. Do you have bees enough to gather the honey from those great gum-trees? and do you understand giving them room in their hives as fast as they can use it?

IDA'S LETTER AFTER SHE FELL DOWN STAIRS.

A NOVEL WAY OF KEEPING A SWARM OF BEES FROM GOING OFF.

IT is much harder for me to write this time, because a week ago I fell down cellar and sprained my arm very badly. I suppose you wonder that I am writing, as it is my right hand that is sprained; but I wanted to tell you that I hived two swarms about four days before my accident. I had a very hard time hiving them, for they were near the top of a high tree, which I had to climb. I think it was just two days after I was hurt that the bees swarmed again. We were in quite a fix, as you may suppose, for there is not one in the family who will *try* to hive them but my brother Bertie, papa, and I. Bertie and papa were away, and my arm was hurt so that I could not use it; so, what do you think Wilfred did? He poured a pailful of water on them, so they could not fly away. They stayed there until pa came home in the evening. Pa took the net that the girls use to catch insects in, and held it under the branch where the bees were, and shook the branch, and the bees fell into it; but pa could not get the queen, so the bees clustered on the branch again. Pa tried several times, but to no effect. He had to cut the limb off, which he was trying to avoid. Pa got them at last. I hope the bees will wait until my arm gets well before they swarm again. I must stop writing, for my hand begins to ache. IDA SINGLETON, age 13.

Brooklyn Village, Ohio, July, 1883.

I think you have written a very good letter, Ida, and I admire the energy with which you saved the swarm of bees, although I am not sure I would advise pouring a whole pailful of water on the little chaps. Did they get dried off, so it did not hurt them any?

OUR GOOD FRIEND MRS. HARRISON.

ALSO SOME FUNNY STORIES ABOUT HER PETS.

WHILE I was at work in the apiary this morning, I was thinking, and kept thinking, of the bee-children. I'm only a grown-up child, and I like Sunday-school and playthings, just as well as you do. You think grown-up people can do just as they want to do. Now, this is a mistaken idea; we can't do any such a thing. The Sunday-school superintendent says, "Sister Harrison, you've *got* to teach that class," and I do it, when I would so much rather be in a class, and have a teacher take me over the same ground with Paul and Barnabas in that first missionary journey. Did you ever think of it, that people and children all over the world are studying the same lesson, on the same Sunday, since we have the "International Lessons"? Isn't this grand? And if we all "apply our hearts unto wisdom," the world must become better for this Bible-study. We must abhor the "accursed thing," such as lying, stealing, and being cruel to animals, and to one another. I've read somewhere, that when the apostle John was an old man he used to keep repeating, "Little children, love one another."

When I was at Lexington, at the convention, a bee-keeper looked out of the window and said that he "saw two things that he never saw before — an old woman in a swing, and a calf eating a newspaper." If my mother were living (but she isn't; poor soul, she has been dead a long time) she would have said, "Lucinda, you are so childish." And so I am; but I must tell you about my pets and playthings. The grandest pet of all is a dear little girl. Oh! I've told you about her before; but I mean to get a little boy somewhere, and then I'll have a span. We have a little white bantam hen. Dove is her name; she is eleven years old, and, oh my! the way she lays, cackles, and fights cats, when she has chickens, and gets up on the hives and crows! Crows? yes, just like a rooster.

A maltese cat came to see us this spring, and seemed to like us, and stayed. We call him Thomas, and a "mighty fine cat is he." But, Thomas is cast far in the shade by Fannie Sprague, who is a baby-horse, and rears up before, and antics up behind.

These are all a "happy family;" but there is "enmity" between them and my special pets, the bees. I don't believe that even Barnum could teach them to live together in peace. He hasn't them in his "happy family." If the bees get after Thomas, he scampers off, with his tail looking like a rolling-pin; and the antics that Dove cuts up, trying to scratch off the bees from her comb, is laughable to see. But if they should sting the velvety nose of the colt, I'm afraid that I should have to call upon the rocks and mountains to cover me from impending wrath.

A TOY BEE-HIVE FOR THE LITTLE FOLKS.

I've one of Mr. Jones's little hives that he imports bees in. It has two little frames, about three inches square. Cute, isn't it? I put a young queen in it, and set it where the young bees could crawl off from the sections into it. It is full of bees, and the queen will be laying in a day or two. I want to be playing with it all the time. Who among you will make a little hive, just large enough to hang two sections in, and raise queens in it, and tell us all about it in the JUVENILE? MRS. L. HARRISON.

Peoria, Ill., July, 1883.

Mrs. H., that is what I call a good juvenile letter. You just tell your friends that I hope you will be childish enough to interest children as long as you live. I am real glad to hear that you are in the Sunday-school work; and I wish you would tell that superintendent that he did the best thing that could be done, when he told you that you had *got* to teach that Sunday-school class. I would have given almost any thing to have been right behind you, so I could listen, while you knew nothing about it.—Now in regard to a hive for children to play with: A good many years ago neighbor Blakeslee raised queens in nucleus hives, made by setting two sections of honey in a little box. As the sections have no top-bars, so they can be hung in the hive, I would suggest having some little strips in the bottom of the hive, just far enough apart to hold the sections up from the bottom-board; for you know we do not want to mash the bees when we put the sections back in the hive. The nicest way would be to have some folded tins tacked to the bottom, just the right distance apart. These would act like the metal rabbets themselves. The bees could not well gum them together. The hive to hold these two sections (or perhaps three would be better) is simply a little box with an entrance in one side, and a loose cover. If the sections are those with closed tops, no cloth or enamel sheet would be needed over them; for the hive could be made to fit so closely to the sections that no bees could get up to glue the cover down. If a little brood were in one of the sections, it would hold the bees from going away, very much better; but oftentimes they will cluster about a queen-cell, if one is given them. Plenty of bees to stock these little hives can be had by brushing them off from the sections, or getting young bees from a comb of brood. If there is not more than about a teacupful, they will not be very apt to sting. The principal objection to this little hive, or, in fact, to all little hives, is, that if not closely watched, the queen will fill all her combs with eggs, and then they will all swarm out. You see, she would lay all her combs full of eggs about the first day she commenced laying; and then if she were not sold, or used immediately, there would be swarming out. But notwithstanding all of these objections, I believe such little hives would be splendid playthings for the children; and the expense is so little, even if neglected or lost, it would be only a small item.

A "CONVENTION" REPORT.

NOT A BEE CONVENTION, BUT A "COW" CONVENTION.

It may not be uninteresting to tell the little folks how our people celebrated one of their monthly horticultural meetings. They met at the home of a wealthy farmer who owns quite a lot of Jersey cattle, which proved one of the principal attractions — especially so after partaking of the ice-cream, of which there was thirty gallons, and some of it made from pure Jersey cream. There were about two hundred and fifty present, and five large tables were loaded with every thing good to eat, in their large clean barn.

After the eating, came the seeing of fruits, vegetables, etc., on the exhibition table. Among other things was a basket ornamented with flowers, which, on being opened, was found to contain a four-legged chicken. Children who like chicken-legs would no doubt be pleased with such a pet.

In the afternoon the meeting was called to order by the president; and after the preliminary exercises, the host, a most genial gentleman, read an essay on the cow, and he spoke from practical experience, being rich in Jersey cattle. After this followed a lengthy discussion on cows in general, ladies as well as gentlemen taking part.

Strawberry culture was next introduced, after which the meeting adjourned to meet in four weeks.

There seemed to be but one thing lacking, and that was honey; but I promise myself there will be at least one pound of white-clover honey next time. Honey is quite plentiful now; and for once, persons can take their choice or chance of more bees or more honey. We like the one-pound sections here, and find the ones that fold, very easy to make, but not so generally inclined to stand square as the ones made of four pieces. E. M.

Anderson, Ind., July 7, 1883.

I am sure I can not say, my good friend, how much the little folks are interested in such conventions; but I am inclined to think you must have had plenty of them on hand. I guess, too, they went home rejoicing. The ice-cream part, I am sure, they were interested in; and I think it quite likely that many of the children, as well as the women, were interested in the Jersey cattle. By the way, did I ever tell you that we have a little Jersey heifer? Her name is Lena.

IS THE FIRST-GATHERED LINDEN HONEY SUPERIOR?

AN IDEA SUGGESTED BY A LITTLE GIRL.

In regard to linden honey, we think the honey gathered in the latter part of the season, when the flowers begin to fade, is not nearly so good as that which is gathered first; and if it is all mixed together, it will spoil the flavor. We keep ours separate, and sell that which was gathered last, at a much reduced rate. We have a pond, 114 by 75 ft., and about 5 ft. deep. There are two pipes leading from it; the one goes through the dam into the side of a trough, so that the water in the trough is level with that in the pond, and the other is so we can let the water off when required. What kind of fish do you think would be best to put in the pond?

ESTHER PETTIT, age 12.

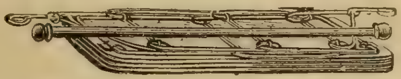
Belmont, Ont., Can., June 28, 1883.

My little friend Esther, I am inclined to think you have struck on something very important. It is true, a little further observation may be needed to verify the matter; but at first glance I believe you are at least partly in the right. When the basswood first blossoms, the flowers have a bright, fresh, sparkling look; and who has not admired the bright flashing honey, looking like thousands of dewdrops sparkling from the snowy petals? Well, this honey from the freshly opened blossoms, according to my theory, would be the purest nectar. To-day is the 12th of July, and last night, toward dusk, I took a look through the apiary, to see if the boys and girls had given room in all the hives. The first hive I opened I found crammed full to repletion; not only was every little cranny between the combs filled up, but little fins of snow-white comb appeared about the ends of almost all the frames. These bits of new comb were filled with bright sparkling basswood honey that seemed to me, as I put the little chunks in my mouth (just to get them out of the way, you know), about as near the definition of nectar as any thing I know of. It was the first basswood honey! Well, now, if you look at a basswood-tree just at the close of the basswood season, you have perhaps noticed that the flowers look old and dull; all sorts of bees, bugs, and flies buzz over them, and the bees scattered over the tree have a sort of sorry look, compared with those that came when the bloom first opened. Now, then, is honey gathered from a tree in this last condition, equal to that of the first-opening blossoms? Who will tell us?—I am glad to hear about the fish-pond, Esther. I do not know much about fish; but of late the German carp seem to be attracting more attention than almost any other fish.

A NEW HONEY-STAND.

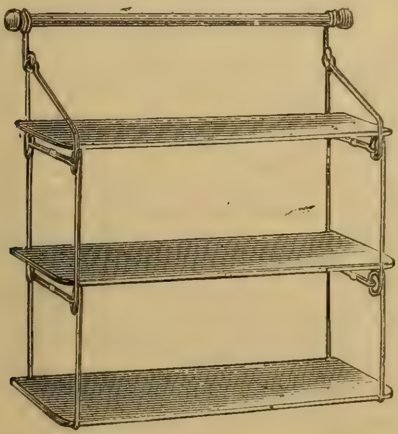
ONE THAT CAN BE DOUBLED UP AND SENT BY MAIL.

A FEW days ago we received a neat little package by express. After we took the wrappings off, we found something that looks about like the cut below.



HONEY STAND IN THE FLAT, READY FOR SHIPMENT

After taking the pieces apart, and looking at them a little, we found it was intended for a honey-stand or book-shelf; and when we got the pieces together, it looked something like this:



HONEY-STAND READY FOR USE.

The three shelves are 22 inches long by 6½ wide, and they stand about 9 inches apart. The framework is made of wire, so heavy that it would stand 100 lbs. or more; and yet the whole is so light as to come within the prescribed limits to be sent by mail (four pounds). The whole is made of hard wood, neatly varnished. Price $1.00; or sent by mail for $1.64. We can furnish them, if desired. Not only is this a splendid thing for displaying honey for sale, but there are only a few families but could use one or more of them to most excellent advantage for book-shelves, or a sort of bracket for curiosities, etc. Most children (besides some other people) are prone to fall into the habit of scattering things about, when a neat little shelf might induce them to form habits of putting things away. I suppose you know how it is in your own homes. Now, I can not think of any thing much nicer for a child's sleeping-room than a shelf like the cut above, to hang up in it. I thought, when I first saw it, that they ought to be furnished for rather less than $1.00, and I think so yet; yet that is the price fixed on them by the friend who sent it, Mr. A. W. Stuart, Belleville, Ill.

JESSIE'S LETTER.

HER ACCOUNT OF THE WAY THE MEN MANAGED WHEN THEY CAME AFTER THE BEES.

WE live on a farm five miles from any town. My mamma keeps bees. She sold 6 colonies yesterday, and the men came to get them last night and the bees stung them. There were three men and one boy. They all had mosquito-bar over their faces. They looked very funny running around in the moonlight with the mosquito-bar sailing out behind them. A bee crawled up under Mr. Ladd's coat, and stung him; he jumped as if he had been shot, and yelled *murder*. The men asked him where it stung him; he said, "Right on the bustle." They did not get started away till midnight. They seemed to have a great deal of fun; when one would get stung all the rest would laugh at him. We watched them from an upstairs window, till we grew tired and sleepy, then we went to bed, and left them to fight it out.

I have been making section boxes, and filling them with fdn. I can make a hundred section boxes every hour. I like to do it. I think it is more fun than playing jackstones, and I like that very much. Jackstones are some little iron things. There are five of them; you throw them up and catch them on the back of your hand. One way you catch them is called "riding the elephant;" another way, "making the beds;" another, "setting the table;" another way you throw them and catch them five times, etc.

My big sister Minnie goes to school in Ipava, and all the children in that school played jackstones, and when Minnie came home she bought me some for a birthday present. My birthday has not come yet. I will be 11 in July; but Minnie did not wait till my birthday, to give me the jackstones. They cost only 5 cents. If I were a rich little girl I would buy jackstones and give them to all the poor children I know. They would be good to amuse them, while their mothers went away from home to wash for other people. Mamma bought her fdn. of Mr. Dadant; it is so nice that I keep wanting to eat it; but mamma won't let me. She says if I want to eat beeswax, I must go in the kitchen and eat the homemade kind. If you like this letter, I will write you one every month. JESSIE CHADDOCK.

Rose Park, Illinois, June 19, 1883.

Your letter is a very good one, Jessie, and I should like to have you send one every month. And you love to play jackstones too; and well do I remember it, since you tell us about it. Such games are very well for small children, and perhaps occasionally older ones, if they do not neglect important duties when they get much interested in the play. I do not believe it a good plan to take very much time for games, because, after you get through, nothing, or comparatively nothing, is accomplished. If you play with a hive of bees, or a garden, or silkworms, the result of your play is something healthful and valuable; and I, for my part, would not want to take much time for any thing that did not leave some tangible result afterward. I want to see something built and finished and accomplished — some "value received" for every hour I expend my energies.

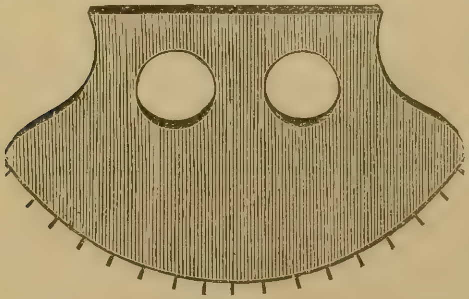
ANOTHER DEVICE FOR FASTENING FDN. INTO WIRED FRAMES.

FRIEND EASTERDAY'S INVENTION.

IT seems, friends, there is going to be no end to the implements devised for fastening fdn. into frames. A few days ago a queer-looking implement came with the mails, and with it the following card:

> When visiting neighbor Sanford he showed me the *machine* you sent him for pressing the wires into fdn. It made me feel sorry for him, as well as your other customers, so I concluded to send you a device like the one I use for that purpose. It goes in the same mail with this. E. S. EASTERDAY.
>
> Nokomis, Ill., July 9, 1883.

The implement which we show you below, or, rather, a little modification of it, made by Mr. Gray, was carried to the girls, and they at once pronounced it ahead of the carpet-stretcher. The latter requires so much power to imbed the points all at once, they find it quite tiresome on the arms, whereas friend Easterday's machine is used with a rocking motion, so that only one or two points are sunk at a time; it therefore requires but very little power to work it, and can be used even faster than a carpet-stretcher. Mr. Gray's improvement was to make the machine large enough so that the curved part would just reach from the top to the bottom of an L. frame.



EASTERDAY'S FDN. SETTER.

The machine is made of $\frac{3}{8}$-inch basswood; the points are exactly the same tin points as are used in putting the glass into honey-boxes. The length of the curved surface is about 8$\frac{1}{2}$ inches, and the points are perhaps half an inch apart. We can furnish the machines for 10 cts. each; sent by mail, 5 cts. additional. Now, for fear somebody will think of a wheel in place of this machine, I will say that wheels with points in them were used a long while ago; but we find this "chopping-knife"-looking implement to answer far better than any of the wheels. I think I shall not give friend Easterday more than $1.00 for this invention, because somebody will be sure to have a better thing for the purpose in ten days or less.

JUVENILE DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye, takin' notes;
An' faith, he'll prent it."

CHILDREN, just now I have only two things in my mind. The first thing is business; and business, so much of it that it almost buries me up. The other thing in my mind is that baby I have been telling you about. Now I just want to tell you one more funny trick of his, and then I will let you write your letters. Almost everybody, young or old, has some way of expressing his displeasure; and how do you suppose our baby expresses his displeasure? He does it in a way I can express only by saying that he "grunts" his displeasure. When he wants somebody to take him up, he grunts; and when he is hungry, he grunts; and when Blue Eyes and Caddy kiss him so many times he gets tired of it, I tell you he makes known his displeasure by a series of grunts that sound almost like "m-m-m-m." Well, now comes the funny part of it. He has a pair of chubby little hands that he thrashes around at a great rate sometimes; and yet he does not seem to know that they belong to him. Sometimes he claws his nose and face with them, so that he makes great scars, and has even made the blood come. Well, he has hurt his face with his hands so many times that he has got to be afraid of them; and when these mischievous little hands come up before his face, of late he squints and dodges, and then grunts and scolds to have them go away. Don't you think he is a smart baby?

A FIVE-YEAR-OLD "TOOT."

MY NAME IS TOOT GROWN. A BEE STINGED ME. I WAS TOO NEAR THE BEE. THAT BEE WAS MAD. I AM FIVE YEARS OLD.

Yorkville, Ont., Can. TOOT GROWN.

GOOD NEWS.

My papa does not use tobacco. The bees do well; papa and mamma have extracted 300 galls. of honey this year. Papa sent you a sample of palmetto honey. CARRIE BELL FROSCHER.

La Grange, Fla., June, 1883.

Well, Carrie Bell, that is good news indeed, both on the tobacco matter and the honey; 300 gallons would be over a ton and a half. I suppose you will all keep sweetened at your house, won't you?

KITTENS, BEE-HIVES, AND PEACHES.

I am a little girl 7 years old. My old cat has 5 kittens. Pa has 40 bee-hives, and lots of peaches.

Brookston, Tex. **DOLLIE FITZGERALD.**

STRAWBERRIES, WITH SUGAR AND CREAM.

My papa keeps bees. We wintered 11 swarms in chaff hives. They swarm nearly every day. I have a swarm. Mamma has to watch them. We have strawberries, sugar, and cream, for supper.

FANNIE MATHEWS, age 7.
Kinsman, Trumbull Co., Ohio.

I am a little girl. I have three sisters and one little brother. I still bake for mamma. My sister and I sometimes wash. My papa has six stands of bees. I still live at grandpa's in the summer. I have no bees, but papa says that on my birthday he will give me a swarm for a present.

Newburg, Pa. **FLORA S. BRECHBIEL.**

It has been quite a while since I wrote to you; it was in the fall. Papa had 8 stands of bees in the fall, and he brought only two through, very light. He bought 6 and now has 12. They are doing pretty well now. They are working on white clover mostly, now, as there is lots of it here. Papa is thinking strongly of coming over in the fall to visit you.

ALMA MATTHEWS, age 13.
Kinglake, Can., Ont., June 25, 1883.

We shall be glad to see him, Alma.

I saw your kindness in giving the little folks books for writing letters, and I thought I would try to earn one too. My father had three stands of bees last fall, and this spring they were reduced to one, on account of not having honey enough. The swarms were too late in the season, and they did not gather enough to winter them; so the earlier they swarm the better for the bees and me, for I love honey. We have had two swarms this spring, and they are doing finely. **ROBERT G. MCCLELLAN**, age 13.

Tusseyville, Centre Co., Pa., June 28, 1883.

BELL-RINGING TO STOP SWARMING.

My father has three stands of bees in the new patent hives, and when they swarm we take pans and hammer on them so that they can not hear the noise of the queen, and then they will settle on the first tree or bush they come to; and if the limb is high that they settle on, we saw it off, and then we take them to the hive. **ELMER R. MCCLELLAN**, age 11.

Tusseyville, Pa., June 28, 1883.

Well, Elmer, I do not see but that we shall have to give up, and let bell-ringing and tin-pan beating go on. After what friend Virgil tells us about it, I suppose we can call it a sort of celebration, to welcome in the swarming season.

AN OBSERVATORY-HIVE.

Pa made me a hive with two sides that let down; and on each side, where it lets down, is a glass so we can see the bees and queen on either side, for there is but one comb in it. The queen has been out today. Why do the bees hold her fast when she comes back? **WILLIE P. MOOREHOUSE.**

Mombaccus, N. Y., June 25, 1883.

Your question is a hard one to answer, friend Willie. It has been suggested, that when the queen goes out and meets the drone she acquires a different scent, and the bees therefore sometimes grab hold of her as an intruder; but I believe that, as a general thing, she is not harmed, unless it be during a great dearth of honey, when the whole hive seems to be in a demoralized condition.

ELI'S UNCLE.

Now I am going to describe one of my uncles, and the luck he has in raising bees. He has always lived with us. He is getting along in years, and he thinks it is best to keep bachelor's hall. He has two stands of bees. They swarmed last summer; we all got out in the yard, and beat the dish-pan and all the tin pans we could get hold of. They alighted on a small plum-tree, close by. We laid a sheet down on the ground, sawed the small limb off, and put them into another hive, without any trouble. This last winter he stood up fodder all around them; and if there came a warm sunshiny day he would take the fodder away from the entrance so they could fly out. They kept nicely all winter.

Wilmington, O. **ELI L. BABB**, age 11.

HONEY-COMB WITH THREE LAYERS OF CELLS.

I have a little brother about 2 years old, and another 3 weeks old. Papa has 19 hives of bees, and I have one. He had 9 hives last spring; he had 12 in the fall, and lost 2 by wintering. A mouse got into the other. They increased to 19 by natural swarming. They made 1500 lbs. of extracted honey and 200 lbs. of comb honey. My little brother Harry is an awful mischief. He knows all his letters. Did you ever see a comb of honey with 3 layers of cells, one between the other? I never saw more than one. Here is some poetry I wrote about Harry, last summer.

BABY-BROTHER HARRY.

A POEM BY HIS 11-YEAR-OLD SISTER.

I have a baby-brother, a darling little elf;
He is busy all the day, a playing by himself.

And, oh! it's cute to see him eat, right out the sugar-bowl,
And now I 'spect he's mining, out in the bin of coal.

He'll go into the pantry, and drag down from the shelf
The oat-meal, graham, buckwheat, and mix to suit himself.

He went out to the bee-hives, when no one else was nigh,
And, oh! it was pitiful to hear his piercing cry.

Kempton, Ill. **C. B. MORRILL**, age 11.

HOW TO MAKE A CAPON TAKE CARE OF CHICKENS; BY ONE OF THE JUVENILES.

My mother lets her chickens stay three days with their mother, then she takes a capon and pulls the feathers from his breast, and then stings the place with nettles until it is red, and then wets it with strong salt and water. This is done after dark. She then sets him in a dark place, and then puts the little chickens under him, and keeps him there until he clucks like a hen, then takes him out, and puts him into a coop, and treats him just like a hen, and he will raise them better than a hen.

J. P. ISRAEL, JR., age 12.
Point Loma Light-House, San Diego, Cal.

Very well told, my little friend. I am not much posted on capons, but I suppose the idea is to keep one of those big fellows caring for the chickens, so the mother may make herself useful by raising more chickens, or laying eggs. I have heard something of the kind before, but I confess I do not quite see what pulling off those feathers, etc., has to do with the matter. Won't he take care of the chickens if this were not done? You see, my little friend, that you know all about something of which those ever so much older are entirely ignorant.

We have kept bees since 1875, and have at present 42 swarms. We got 1800 lbs. of white-clover and basswood extracted honey. Pa never raised any comb honey, but will try this summer. Our bees are in Langstroth hives. We bought our first bees of Adam Grimm, of Jefferson, Wis., where we used to live. **EDDIE BAUERNFEIND**, age 13.

Menasha, Wis.

I have so much to write to you, I don't know which to write first. We have had 9 swarms, and have 11 yet to swarm, besides the second swarms. The first swarm we had, the queen got killed in the hive, and we took a frame out of another hive that had a queen-cell, and put it in with the new swarm, and the bees went to work all right.

New Milford, Pa., June, 1883. **ROSE SMITH.**

I am not quite a blasted (grass) hoper, as my brother calls me, but very near one. I had one colony of bees to put up last fall, and they all died in the winter. My brother lets me have one colony on shares this season. He gave me a tested queen to send to you. She is one year old, and a good one. **ALICE I. DEYO.**

Homowack, Ulster Co., N. Y., June 13, 1883.

1000 LBS. OF NEW HONEY.

My pa keeps bees. He had 8 before they swarmed, and now he has got 14 stands. They swarmed so much that he almost ran out of hives. He thinks he will get 1000 lbs. of honey this season. I like honey very well, but I don't like stings. We have all Italian bees. They will sting when he tries to take their honey. **HARRY HUSTON**, age 12.

Dayton, Ohio, June 12, 1883.

HOW TO RESUSCITATE A FROZEN SWARM OF BEES; FROM ONE OF OUR SOUTHERN JUVENILES.

I see in the JUVENILE that you sent us, the little girls up North are telling what they can do. I can help my papa to puff the smoker when he looks in. He had a stand of bees last winter that was so nearly frozen to death they couldn't move, and he warmed ma's old shawl and put it on the bees, and then he put on the honey-board, and heated the oven-lid, and put it on top of the honey-board, and they came to life, and now they are as good a hive as he has. **JOSIE DAVIDSON**, age 12.

Pisgah, Jackson Co., Ala., June 13, 1883.

DON'T KILL THE TOADS; A POEM BY ONE OF THE JUVENILES.

I write to thank you for the book you sent me. There has been so much rain here this spring that bees have done but little. Do the toads trouble the bees in your apiary? Sometimes they are very troublesome here; but we do not kill them. We think that too cruel. Boys, remember this:

Don't kill the toads, the ugly toads,
  That hop around your door;
Each meal the little toad doth eat
  A hundred bugs or more.
He sits around with aspect meek,
  Until the bug is neared,
Then shoots he forth his little tongue,
  Like lightning double-geared.
And then he soberly doth wink,
  And shuts his ugly mug,
And patiently doth wait,
  Until there comes another bug.

Pinson Station, Tenn. **SHEPPY SIMMONS.**

That's right, Sheppy; spare the toads, for the good they do is far more than the evil. Your poem is going the rounds of the press, and strikes us as very funny. Didn't you copy it from your paper?

HIVES FOR A DOLLAR.

Pa's bees have not been doing very well. We have no swarms yet, and no honey. We have got buckwheat blooming; the bees have been working on it well. Bees work on persimmon-trees here. Pa makes hives, and sells them at $1.00 apiece. He makes the hives, and I paint them. Pa did not lose any bees this winter, but he had to double some to make them stronger. Bees do not need any protection here in winter. Pa feeds his bees on sweetened water and syrup. **NETTIE BRYAN.**

Rome, Ga., June 14, 1883.

STILL MORE ABOUT SWARMING.

Papa had 26 stands of bees this spring, and has 37 stands now. One day the bees swarmed all the forenoon. Papa had just started out to plow the corn when one swarmed, and he had to come back, and then he went a little further and had to come back again. He said he would let me have the first swarm I hived. The bees go up in the trees every time I want to hive them. There is just lots of white clover, and the bees work on it very much. Papa puts salt around the entrances of the hives to kill the grass. **JOHN WILSON**, age 10.

Penrose, Ill., June 25, 1883.

SWARMING, AND SUNDAY-SCHOOLS.

We have Sunday-school in our house. It is not a very large one. Only a few of the neighbors come to it. Yesterday the bees began to swarm, just as Sunday-school commenced, and swarmed till a while after dinner. Papa makes his own bee-hives with a circular saw and horse-power. Sometimes Johnnie and I help him. We like to read the little children's letters. **IRENE WILSON**, age 8.

Penrose, Ill., June 25, 1883.

I have sometimes thought it a little funny, Irene, that bees so often seem to have a fancy for swarming while the folks were gone to meeting or Sunday-school. I suppose one reason is, that we usually have our Sunday-school and meetings in the middle of the day, and the bees also choose the middle of the day for their "celebrations" and emigrations.

A REPORT FROM THE PELHAM FDN. MACHINE.

My sister Em is 14. We make comb fdn. by ourselves, on the Pelham machine. We have the lower roll in starch, and one or two turns backward lubricates both rolls. Em extracts honey, and puts fdn. in frames. I make section boxes, and put fdn. in frames too. I watch the bees to see when they swarm. **ESTA WILLIAMS**, age 11.

Vanceburg, Ky., June 13, 1883.

I am very glad, my little friend, to hear a report from the Pelham fdn. mills, especially as they are so much cheaper than ours. You did not say how the fdn. works in the hives; but I suppose it works all right, or you would have said something about it. I was a little afraid that it might be expensive, on account of receiving more wax in the bases of the cells than would be the case where the base was made the natural shape.

HARRY'S UNCLE WALTER.

My uncle, Walter Pouder, keeps bees. He has 19 swarms, and some queens. Walter used to be one of your "neighbors," so you know him, don't you? I go to Sunday-school, and Walter is our secretary. He writes for a newspaper about bees, and then it doesn't cost him any thing to advertise. Lots of people write to him and ask questions, and they think he is a big man, and he is only 20 years old. I have three brothers, and a little sister called Elsie. What do you think of the name? We live on a farm about a quarter of a mile from Groesbeck, and we have plenty of work to do all the year. Pa will not keep bees. I guess he is afraid they will sting him; but when I get old enough to tend to them I will have some. HARRY CRAGG, age 13.

Groesbeck, Ham. Co., Ohio, June 25, 1883.

To be sure, I know your uncle, Harry. I am very glad indeed to know that he is secretary of the Sunday-school, and making himself useful by writing for the newspaper; and I hope he will get to be a "big man," in the best sense of the word. We are very glad to hear from him.

WHITE POLLEN; WHERE DOES IT COME FROM?

As I did not see any letters in the JUVENILE from the boys or girls in the Black Hills, I thought I would write and tell you how we are getting along out here. Papa has one colony of Italians; and though he is not much of a bee-keeper, we think they are doing quite well. They have a large brood of young, and eat a great deal. I should like to know what kind of a flower bees get white pollen from. We live in the country, 35 miles from Deadwood, and pa is postmaster here.

Empire, Dak. IRVIN CRAIG.

Well, Irvin, I can not tell where your white pollen comes from, but we sometimes get it here from a weed that grows in the woods, called white snakeroot. It does not bloom, however, until later in the fall than this time.

HOW TO STOP LEAKY COVERS; BY A NINE-YEAR-OLD JUVENILE.

We bought a queen and ten frames of bees last August of J. L. Scofield, and fed them all they could eat. They swarmed May 18, and swarmed the 5th of June. They are filling up the one-pound boxes. If your hives are leaking, cover the roof with duck, and paint it well, and it will last as long as tin. They cover cars and steamboats with this kind of stuff, and they never leak.

Yonkers, N. Y. JAMES J. DOWLING, age 9.

Thank you, friend James. I believe that a duck cover answers very well if kept well painted. The idea was suggested, and many of them were used, a good many years ago; but for some reason or other, I hardly know why, they have been mostly abandoned in favor of tin. I rather think I should prefer the tin; but that, as well as the duck, should be coated with paint.

THE SWARMING-TIME THEY HAD AT MARY'S HOUSE.

I will tell you about our bees. We have 41 swarms. We have 19 young swarms, and 22 old ones. We had 4 go off; 2 of them were large, and 2 were not so large. Our hired girl found a queen in the grass, and papa and I put some more bees with her. We have one swarm that always goes back. It has swarmed 3 times. It swarmed to-day, and went back. What do you think is the matter of them? When they swarmed they stung those who helped. Pa would not let me help with them, because he said they would sting me. Bees are cross sometimes. Our hired girl gets stung a great many times. When pa and I put the bees with the queen that the girl found, my brother ran from the bees. I got stung by them. I do not like honey, but I help all the rest. My brothers and sisters are afraid of them. One of our swarms alighted on the plow; and when we got them hived we went to dinner; and while we were gone they went off.

Buena Vista, Iowa. MARY A. BINFORD, age 11.

Very good, Mary. I should think a plow was a rather novel thing indeed for a swarm of bees to alight on. I think if you had given them a frame of unsealed brood before you went to dinner, you would have found them all right. I think the swarm that went back so many times must have had a queen that could not fly, for some reason or other.

LIZZIE'S STORY.

My papa's bees have kept us all busy the last two weeks. Papa had 9 colonies last fall, and wintered them all. They have all sent out a swarm apiece, some of them two; but papa cut out the queen-cells, and put the second swarm back.

A NOVEL QUEEN-NURSERY.

Mamma put two queen-cells in an egg-shaped gourd under a hen, and hatched two nice queens, one in two and one in three days.

Some boys cut a bee-tree on papa's farm, and left the bees and comb. Papa took a hive to the tree, wired the combs into frames, put the frames into the hive, and the bees went in so fast they looked as if they all wanted to get in first. Papa brought them to the apiary, and gave them an Italian queen, as they had lost their own. The bees are on white clover all day, and night too, I suppose, as I saw one little worker go from her hive the other evening to a white-clover blossom, a few feet from her home. It was so dark that I could hardly see bee or clover.

Mamma says she likes your paper very much, and could not do without it. LIZZIE WOODRUFF.

Greencastle, Ind., June 22, 1883.

DRONE-CELLS THAT LOOK LIKE QUEEN-CELLS.

My sisters and I made a very curious observation the other day, of which I have never read before in any of the bee books or journals. When we opened a hive and took out a frame of worker brood, we were astonished to see what at first sight seemed a great number of queen-cells sticking out horizontally. On closer examination we found them to be drone-cells built on the surface of the worker brood. They were about half an inch long; their apices touched the surface of the adjoining comb. On lifting out the frame containing these curious cells, some broke loose, so that in this way we were shown that we could easily knock them off with the screw-driver. This we accordingly did.

LILLIAN E. MILLER.

Savannah, Ga., June 18, 1883.

I have noticed something of the same thing, friend Lillian, only I do not know that I ever saw the drone-cells so long that they would break off. I suppose it is only a freak of the young bees, that had nothing else to do, so they amused themselves by elongating the drone-cells a great deal further than they needed to be — something as they elongate the cells to contain honey when it comes in a great flood. Perhaps some one else can tell us something about it.

GETTING DOWN A SWARM OF BEES BY SHOOTING OFF THE LIMB.

Pa has had very good luck with one hive of bees this spring. They swarmed twice in one week. He put them in what he calls patent hives. One hive had comb in it that the bees made last year. Do you think it is a good plan to put bees in a hive where comb is? One of our neighbors had a swarm that settled on a branch of a tall sugar-tree. He shot the branch off with his gun, and hived the bees.

Shermanville, Ky. ANNA B. BUTT.

I should think that was pretty sharp shooting, friend Anna. I have heard of bringing down swarms of bees by shooting, but I always thought it was a sort of "yarn." I suppose you wouldn't tell us a yarn, would you, Anna?—Use the old comb *always*.

LAMP NURSERY AND THE TELEPHONE.

My brother takes GLEANINGS, and keeps bees; he hatches queens in a lamp nursery. He went away on a month's visit last September, and left me in charge of the lamp nursery, and partly in charge of his apiary. We had some trouble with the bees coming out and leaving some of the hives. We have a telephone which extends from our house to my married brother's, so when the bees swarmed out I could call him to hive them. One day when he was in town the bees swarmed, and there was no one to hive them but myself. When they settled I took a queen-cage, and asked my mamma if she would not hold it for me. I hunted among the bees until I found the queen; then I caught it, and put it in the cage and mamma shut her up; but the lid did not fit tight, and the queen flew out; but after some trouble I caught her again, and put her in another cage, and put her in a hive that did not have any queen. MAGGIE DUVALL, aged 12.

Spencerville, Md.

HELP FROM THE JUVENILES ON THE TOBACCO COLUMN.

My papa keeps bees; he has 5 swarms of blacks. He is going to get some Italian queens, and put with them. He has chewed tobacco 40 years, and has now stopped and is not going to use any more. I want him to have a smoker, so that he won't have to smoke them with tobacco, for fear that he will get to using it again. Papa is not very well, and I have to help him all I can. MAUD A. BACON, age 11.

Brookfield, Madison Co., N. Y., June 29, 1883.

That's right, Maud. Why! I shall be real happy to think that the children all over our land are going to turn in and help in this tussle with tobacco-using. May God bless your good old papa, Maud, and help him to feel that, although he has used tobacco for 40 years, he has done a grand good thing in leaving it off. We have sent him a smoker, and have plenty more to send in the same way. Surely no one would ever break a promise made to "one of these little ones."

THE QUEEN THAT WAS LOST, AND WHERE SHE WAS.

My father had three stands of bees last fall; he had them all in chaff hives; lost one Italian stand. He had one Italian and one black swarm in the spring. The Italians swarmed the first day of June. They are waiting for a pleasant day to swarm again. He sent to you for one untested queen. He introduced her, and let her out of the cage. He went out at night to look after her, and he saw a bee in a drone-cell; he didn't know that it was the queen; he thought his queen was gone. He said he felt pretty blue; but two days afterward he found her crawling around on a frame. He supposed that it was she in the cell. He told me to tell you to put him in the Smilery. I am at work washing dishes for mamma for ten cents a week. When I get money enough I am going to buy a pound of bees. I am going to be a bee-man, like you. I have a corset lamb and two sheep, and a black hen and a black chicken.

Clinton, Me. GEO. F. GREELY, age 11.

I think, friend George, the queen crawled into the drone-cell because she was frightened, or afraid of the bees. I have often seen them crawl into a deep cell and stay some time when they had been just let out of the cage. I wonder how many of the children can tell what George means by a "corset" lamb, and why is it so called?

HONEY FROM THE FUCHSIA.

Mamma, my sister Nellie, and I, have some house-plants; and among them a little red fuchsia, whose blossoms dripped with honey all summer. Nellie caught a bee and put it on the blossoms, and it sipped eagerly. Our Warrior and Anabella fuchsias have honey also, but not so much as my little red one.

Papa sometimes gets in a hurry, and then the "Trio," as mamma calls Nellie and me and my brother Johnnie, help him wire frames, and put together sections. We each had a wooden mallet for the sections; but one is broken, and I don't know where the other two are; but papa is not going to raise any more comb honey, so we shall not make any more.

We have seen the bees come in with honey and pollen; and when they had pollen they would dance on the comb to shake it off. We saw a bee last summer with eight flakes of wax oozing from the segments of its abdomen. Nellie and Johnnie can catch a bee on the window, but I can't, for they always sting when I try. Nellie is 12 years old, Johnnie 7, and I am 14. EFFIE J. OLSEN.

Nashotah, Wis., Feb. 1, 1883.

Thank you for the facts you furnish, Effie. I think your papa might feel happy for having such a trio.

BEES AND STRAWBERRIES.

Our bees wintered very badly. We lost 5 out of 54 stands. The remainder came through very weak; but now they are in fine condition. One day we had five swarms, one right after the other. Papa clips the queen's wings, so when a swarm comes out he goes to the hive, catches the queen, puts a cage over her, and puts her in the hive again. Papa has a little pair of scissors to clip the wings, in the shape of a crane. In its eye is the Lord's Prayer. Papa makes ever so much fdn. He got his mill from you. He has got nearly one barrel of clover honey this season, 50 lbs. of locust, and 100 lbs. of comb honey. Papa and I have been so very busy packing strawberries that we can hardly tend the bees. We picked about about 100 gallons. Oh how our backs did ache! During the last two weeks, it has been raining almost every day, so that the bees could hardly work. CARRIE S. HARTMAN, age 14.

New Harmony, Ind.

That must be a funny pair of scissors your pa has, to have the Lord's Prayer in it. I suppose it is what they call a microscopic photograph, is it not? I am glad to know that your papa likes his fdn. mill. His plan of having different kinds of honey kept separate, I think is tiptop. I shouldn't wonder, Carrie, if your backs *did* ache, after picking 100 gallons of strawberries.

Carrie has just written to you, so I thought I would write too. I go to Sunday-school. I take music lessons of my sister Carrie. I have a little yellow kitten, a black and white shepherd dog, and he got stung the other day, and he just howled. One got in my hair the other day. Please send me Blue Eyes' picture. Mamie Hartman, age 12.
New Harmony, Ind.

Very good, Mamie. I just told Blue Eyes what you said about the picture, and she said she hadn't any pictures. I think she will have to get some, and then we will send you one. Blue Eyes works in the office every day. Shall I tell you what she does? She opens the letters for Aunt Mate. You see, when they come from the postoffice they are put right before her. She has an ivory-handled paper-knife with which she opens one corner, and then just slits it across one end, and turns back the corner so that Aunt Mate can pull it out easier. She got tired the other day, and said she wished the folks would not send her pa so many letters. It took Aunt Mate till after dark to get them all opened; and Uncle Amos had to get up next morning before 5 o'clock, so that the clerks could go to work when they came.

I have sent the song. I have given those cards away. Will you send me 100 cards more? Our bees are making honey, now. I sat and watched the bees work yesterday. Carrie E. Shults.
Viola, Richland County, Wisconsin, May 30, 1883.

ANTI-TOBACCO.

BY JAMES G. BISHOP.

Tune — Oh come, come away.

Oh come, come away, all you that would be freemen,
The battle brave, don't be a slave; —oh come, come away;
Let the professor smoke and puff,
The zealous bigot take his snuff,
We'll ne'er touch the filthy stuff,—oh come, come away.

Oh come, come away, and gather round the standard,
Our flag's unfurl'd for all the world,—oh come, come away;
Resolve at once, and lay your plan,
Throw off your shackles, be a man,
Don't say, "I can't," you surely can,—oh come, come away.

Oh come, come away, you younger men take warning,
There's danger lying in your path,—oh come, come away;
Oh! pause, and make a sudden stop,
Your sweet-scent pigtail, finecut drop,
Or you may die a drunken sot —oh come, come away.

Oh come, come away, the day-star now is rising,
Upon us here, we've naught to fear,—oh come, come away;
Relinquish every vain desire,
Throw your old meerschaum in the fire,
Give us your hand and come up higher,—oh come, come away.

Oh come, come away, progressive wheels are rolling,
Drop your cigar, jump on the car,—oh come, come away;
Tobacco-slaves may chew and smoke,
And spit and sneeze, and cough and choke,
But we've cast off the heavy yoke,—oh come, come away.

Oh! throw, throw away, those filthy shorts you're chewing,
They're sweepings from a dirty floor,—oh come, come away;
You need not plead for Jackson's best,
'Tis just as filthy as the rest,
There's not a brand can stand the test,—oh come, come away.

Oh come, come away, the rising generation
Will imitate, there's no mistake,—oh come, come away;
Young men just coming on the stage,
Some hardly fourteen years of age,
In this vile practice do engage,—oh come, come away.

Oh come, come away, for no pure-hearted Christian
Can e'er succeed and use the weed,—oh come, come away;
Oh man! how can you worship God,
And think to gain that blest abode,
With this narcotic in your blood?—oh come, come away.

Oh come, come away, don't tarry any longer,
Leap o'er the hedge and take the pledge,—oh come, come away;
If you'd just look behind the door,
And see that puddle on the floor,
I think you'd never use it more,—oh come, come away.

KIND WORDS FROM OUR CUSTOMERS.

The smoker is a fine one. I believe I could capture a bumble-bee's nest with it.
Letts, Iowa. A. H. L. Stahley.

My shears arrived safely, and gave such excellent satisfaction that I will order some for mother; so please send me * * * * * * *
Wheatland, Cal. Mrs. E. W. Mansfield.

The Favorite scale you sent me came nicely, and we think it a little beauty for the money.
Hartland, Mich. G. E. Lincoln.

I have received the smoker, and have tried it. It is splendid. I return thanks for it.
Moab, Va. Mrs. M. Kesner.

Inclosed please find —— for one of the new-style Waterbury watches, the kind that we can see the time by moonlight. I presume then there will be no excuse for lingering too long at the "garden gate," on the bright moonlight nights in summer.
Philadelphia, Pa. F. Hahman, Jr.

I live 4 miles from Vanceburg, and honey is coming in so fast I can't take time to go to the post-office. Whew! don't those Clark smokers beat every thing? All parties are well pleased with them, and more wanted. All want me to send for them.
Vanceburg, Ky. M. L. Williams.

Your letter with inclosure of check for $29.75 was duly received to-day. Thank you. Your prompt correction of error was quite like you, and worthy of you, and that, I think, is saying a good deal. Honey is still coming in. I hope now to get over 200 lbs. per colony. Have 160 now. Geo. E. Boggs.
Morgan, Ky., July 7, 1883.

Your beautiful Italian arrived in best order. A few hours after, one of her retainers was seen entering the hive with a load of Canadian honey. From this you may infer that the introduction succeeded perfectly well. Receive our best thanks for your promptness in filling our order.
General Hospital, Quebec, Can., June 28, 1883.

The "measly" smoker is liable to run us as well as the bees out of the yard; it makes so much smoke after it once gets started we have to trot it off one side to "calm itself down" a bit. Still, we think we can maintain control of it. Thanks for so good an article for the money. T. Hallett.
Galena, Ills., June 28, 1883.

BLUE-EYED NELLIE.

I will take this opportunity to thank you, in behalf of our little blue-eyed Nellie, who died the 15th of Nov., of diphtheria. She loved to read the Juvenile, and she loved the bees. She was always on hand when I was working with the bees. Oh how I shall miss the dear child when I work among the bees next summer, if my life is spared until then! But she was a good little girl, Mr. Root; she loved to go to Sunday-school, and she loved to say her prayers. God grant that I may so live that when my work is done here I may meet that dear child in that bright land to which we all hope to go.
Kingsville, O. H. H. Pease.

[Thank God, my friend, for the memories you have.]

I think Gleanings worth too much to take it in a club, as I have formerly. I get more and better reading for the money than I can any other way; and now you have added the Juvenile too. I am much obliged for promptness in filling my orders; though small, they received prompt attention. I do dearly love to read the Homes. It is the first thing that my wife or I look for on the arrival of each number; and I pray that they may be a blessing to all who read them; and may the Lord bless and keep you. Wm. Ludlam.
Oyster Bay, N. Y.

[I am inclined to think, friend L., that small orders have received better attention and more promptness than large ones, for the reason that we can set a clerk at work on a small order, who would not be capable of managing a large one. It seems to me I shall be the happiest one of the lot when we get into shape again, so as to give both large and small orders promptness and attention.]

Please send me 4 Clark smokers. The others you sent me I sold before I left the express office.
MIKE WININGER.
Glasgow, Barren Co., Ky., May 30, 1883.

Thank you a thousand times for writing that A B C book. It is well named, as it is as easily understood as the A B C's. MRS. CHAS. HOPE.
Coulterville, May 2, 1883.

OUR FOUNDATION MACHINES.

The fdn.-mill works all right. I have made 30 lbs. of fdn. to-day, and I will send you a sample of the second sheet I made. C. M. DIXON.
Parish, Ill.

We received the fdn. mill and sections, and other articles, in good order; the freight charges were only $1.55. We have tried the mill, and are well pleased with it. CHAS. HERMANN & BRO.
Durango, Iowa.

The fdn. machine arrived the 9th inst. Of course, I have had no time to try it as yet. I was greatly disappointed, however, in one thing: I was looking for directions on gold-edged paper, tied with a blue ribbon, perhaps, and filled full of all mysteries, etc.
Amboy, Ill. R. H. MELLEN.

We received the fdn. machine in good order. We are well satisfied with the selection, although it has cost more than we expected. The expressage was $11.50. It came on Wednesday A.M. We made some comb fdn. Thursday, and put some in the hive Saturday. One comb weighed 1¼ lbs. We tell you this to show you how much of a hurry we were in.
G. C. PACKARD & SONS.
Santa Barbara, Cal., June 10, 1883.

I must say I like the 12-inch mill well. I tried the boards that dipped just one end, and I failed; then I tried the Jones system, dipping one end, then reversing and dipping, then I did *immense*. I like the cell; the bees take to it tiptop. I have done better with the thin than I anticipated. WILL ELLIS.
St. Davids, Ont., Can., June 15, 1883.

FRIEND O.'S INK.

Do you yet have for sale the celebrated Oldroyd inks? I purchased a box of you a year or so ago, and was well satisfied with it. I want the ink for my scholars. I am a teacher of public school.
J. H. KILMER.
Winesburg, Holmes Co., O., Jan 12, 1883.

[Yes, friend K., to be sure we keep friend Oldroyd's ink, and have kept it all these years since it was first made known. We use it in our office by the gallon, and have never yet found any thing better.]

Handkerchiefs received some time ago, and they are a wonder for the money. Looking over the copy of GLEANINGS you sent me, I was attracted by the title, "Another Grateful Pupil," and write this to thank you for the very same kindness — sending me a specimen copy of GLEANINGS in 1878, then reminding me of bees, with a catalogue in the latter part of 1880. The following winter I sent for the A B C, got a hive of bees in the spring of 1881, and now have 10 colonies. ANDREW DURWARD.
Spencer, Wis., Jan. 15, 1883.

It would be hard indeed to estimate the value of services rendered to our house by GLEANINGS. If I am not mistaken, its monthly visits to us have continued almost from the first number; and very many times when the way seemed dark and forbidding to us, GLEANINGS, with its bright cheery face, came in to encourage us to renewed exertions. Especially has this been the case since the "Home Papers" were started. We have been helped out of many perplexities by your kind, brotherly, wise words.
Kansas City, Mo. E. M. HAYHURST.

[Many thanks; and may the good Father continue to bless you, friend H.]

The fdn. machine came to-day (being six days on the road), all in good shape. I put it up and made me a dipping-board. I had an idea that one came with the machine. I put it in boiling water, which will answer better than soaking several days, as you advise; then melted some wax, and in one hour I was running off fdn. as nice as one could wish. Samples of the first sheet are inclosed. I consider the mechanism of the mill fine. Bear in mind, I never saw a mill, nor even any fdn. dipped. Oh! I take part of that back; for I saw some mills in the "dormant state" at your place when I was there some two years ago or less. H. M. MORRIS.
Rantoul, Ill.

Since reading your editorial in the JUVENILE, I think I ought to apologize for indulging in a complaining mood, in not receiving that attention which I thought I ought to have received for delay in sending the goods, especially GLEANINGS. I can appreciate your situation, as I have had similar experience. N. A. PRUDDEN.
Ann Arbor, Mich., June 21, 1883.

[Friend P., you do not need to make any apology at all. I have not felt a bit hurt this season at any thing our customers have said, for I do not blame them a bit. Very likely I should have talked harder than they did. But to a certain extent I was unable to help myself. Thanks for your kind concluding remarks.]

I have one copy of A B C. I received it last winter. It has proved exceedingly valuable to me. I would not do without it for ten times its value. I am a beginner in the bee business. I find them a very interesting study. By instructions from you in A B C, I have been able to increase my bees from 2 to 6; they are worth to me at least $35.00; so you see my investment in your book has been a good one. I have charge of a congregation here at Cuba. I find the bees a help to me for illustration in sermonizing. I can show how diligent the little fellows are in the performance of their duties; how much more we should be in following our Master, who have the light of the gospel. N. A. WHITEHILL.
Cuba, Mo., June 2, 1883.

DOES GLEANINGS PAY?

I see by the printed slip on the wrapper of GLEANINGS that our subscription is out, asking us to renew, if it has been profitable. I will tell you what GLEANINGS and A B C have done, so you can judge for yourself. We wintered 8 stands of bees in Simplicity hives, bees coming out strong. We worked them for honey. On the 15th, we extracted over 400 lbs. nice white-clover honey, and sold it to dealers here at 15 cts. per lb. At the rate honey is coming in now, I think we shall get as much more in two weeks, and give the bees plenty of time to lay in their winter stores. By striking a balance with A B C and GLEANINGS, we shall come out in debt to you. T. T. DAVIDSON & SON.
Parkersburg, W. Va.

STOPPING FOR WANT OF A HONEY-KNIFE.

I received Novice's honey-extractor, sent by you. This morning I extracted 100 lbs. of nice clover honey. It works well. I think it a grand invention. I have more to extract; but for want of a honey-knife I stopped. E. H. BLANCK, M. D.
Hatfield, Pa.

[Why, friend B., I am astonished at you. When we first commenced extracting we never thought of a honey-knife. A common case-knife or a butcher-knife will do almost as well as a honey-knife, only you are in danger of getting your fingers daubed on the honey. If I had honey that needed extracting, I should extract it, honey-knife or no honey-knife. If I could not do any better, I would take a sharp piece of tin and scrape off the caps to the cells. Of course, a good sharp keen honey-knife is a much more expeditious way, and every bee-keeper should have one. But I would by no means let honey go to waste because I did not happen to have one.]

You are the only man among all the manufacturers of bee-fixtures from whom I have always gotten exactly what I ordered. I only wish you were nearer, so freights would not cost so much.
Tyler, Texas. F. E. GASTON.

[And you, friend G., are almost the only man I know of among our 150,000 customers who can, especially at just this present crisis, truthfully say what you have just said of us and our business. I have been feeling sad about this very matter for many days past. The rush and roar of business for so many months on a continued stretch has broken up and demoralized all my nice plans and arrangements for system and order. Well, I am looking forward longingly to the time when business subsides a little, and our new factory gets ready for occupancy, that we may have once more a place for every thing, and every thing in its place. And still more, have a good stock on hand, ready for emergencies, of every article we keep in our price list; and then good trained experienced clerks who won't send the wrong thing instead of the right one.]

Inclosed is a selection from the *Young Folks' Monthly*, by Thomas Aird. I think it is very good. You may have seen it before. I would read the last line like this: "The safety of their Root-built citadels." HERBERT LANGDON.

East Constable, N. Y.

But, let us see our bees,
Before we turn into our ivied porch,
The little honey-folk, how wise are they!
Their polity, their industry, their work;
The help they take from man, and what they give
Of fragrant nectar, sea-green, clear, and sweet,
Invest them almost with the dignity
Of human neighborhood without the invasion.
Coming and going, what a hum and stir!
The dewy morn they love, the sunny day,
Softened with showery drops, liquoring the flowers,
In every vein and eye. But when the heavens
Grow cloudy, and the quick-engendered blasts
Darken and whiten as they skip along
The mountain-tops, till all the nearer air,
Seized with the gloom, is turbid, dense, and cold,
Back from their far-off foraging, the bees
In myriads, saddened into small black motes,
Strike through the troubled air, sharp past your head,
And almost hitting you, their lines of flight
Conveying, thickening as they draw near home;
So much they fear the storm, so much they love
The safety of their straw-built citadels.

A NEW USE FOR THE FOLDING TENT.

You might tell your juvenile readers a new use for the mosquito-bar house, as described in August GLEANINGS, 1880, page 369. I hived a swarm of bees; and just as I finished, a lady called on me to put her bees in a hive. I just set the frame over the new swarm, and ran down and attended to her bees as soon as possible. On returning I found the new swarm had all swarmed out and clustered on the inside of the top of my little house. Again, a swarm issued about one o'clock. Having just finished hiving a large swarm, the buzz of which was not yet quiet, the last swarm was making for them. I just clapped my frame over my first, when they clustered right on the end of the frame, and as near the entrance as they could get. Yesterday a nice swarm issued; and before I could get the frame about, they went and joined a weaker swarm close by.

We are, in this part, having lots of swarming, and swarming *fun;* but up to this date we have not a pound of honey capped over. I think it a sorry outlook for honey thus far. Rain, rain, rain; cold nights, and wind; sunny one day, then rain; clear up, and windy; and thus it is. It makes my mouth water to hear of the large yields of honey elsewhere. But then, the cattle all have long horns a good way off. C. S. BURKE.

Albion, N. Y., July 11, 1883.

As you don't often hear from this corner of the "vineyard," you need not think we have forgotten you. Your name is almost a household word, and you are spoken of betimes by the very endearing name of "daddy" Root. I believe you are popular enough in the United States, to run for * * * I for one will promise to support you, not knowing your politics, but believing that you are more zealous in your religion than in politics, which is politics enough for me, not ignoring the latter altogether. But, I want to say a few things about *bees changing sex of eggs* — not that I can throw any light on the subject, further than theory. Entomologists say, "It takes the most highly concentrated food to develop the female in insects." Among bees we have a subject for each degree of comparison. Do you know of others that are not *abnormal?* I do not infer from the above, that food produces the different sexes, although some might. If I did, it would be, drones, concentrated; workers, more, etc. It hardly seems reasonable to suppose that a queen *knows* what eggs will produce drones; for if she does, we should have to attribute to her as much or more knowledge than to any other species of animated nature. She may be actuated by instinct, but is no more cognizant of the result, than a dog is of making a better nest in straw by turning around several times. But, if a knowledge of *how* the drone is produced is of any benefit in bee culture, and it can be attained, let us devise some plan to have it done as soon as possible. JAS. SOMERVILLE.

Brady's Bend, Pa., Dec., 1882.

["Every man to his trade," friend S.; and if I fit my place, and my place fits me, I think I am all right where I am, thanking you for your kind words at the same time, even though they are so fearfully extravagant. There is a large field for experiment and study in this matter of queens, drones, and workers; and the more one tries to conjecture on that he does not know, the more I conclude that *I* don't know.]

THE REASON WHY WE CAN NOT SEND THE JUVENILE ALONE, ETC.

My little six-year-old boy says, "Pa, I want you to write to Novice to send me a bee-journal." The words are quoted correctly. He puts in the same plea morning, noon, and night, and will take no denial or substitute. He must have JUVENILE GLEANINGS addressed to him, and he pays for it with his own money. He has one colony from which he sold $5.60 worth of honey. He has just been in my room during recess to see if I am going to write to-day. Can you appreciate my feelings when I tell you I am anxious to have my boys become enthusiastic bee-keepers before I am gone, that they may be prepared to commence where I left off? And do you think the juveniles would understand if I should record a wink as I inclose the stamps, as this little boy so much desires? And can you imagine the knowing glances that will be exchanged by his pa and ma when they see him in possession of a copy of his own JUVENILE GLEANINGS?

Mt. Zion, Ill. J. S. HUGHES.

[Friend H., your kind letter has a world of truth in it. One might almost be tempted now to think that this JUVENILE is a sharp trick of mine to get subscribers; but when I started it, my only thought was, to help lead those little ones in wisdom's ways. The reason why we can not send the JUVENILE by itself is, that it would necessitate another expensive subscription list, and an extra set of clerks to manage it. Only a very few among our 5000 subscribers have objected to the JUVENILE; and I believe they took back their objections when told it cost them nothing, not even a penny for postage. Tell your little six-year-old that Uncle Amos sends his best respects, and rejoices to know that he is already a prosperous "bee-man."]

I don't know but I am intruding in the company of bee-keepers, as I am only a railroad man; but I claim relationship to yourself on other grounds, and I write because I want to give in my testimony. Some months ago a friend of mine here who keeps bees loaned me the 1879 volume of GLEANINGS. I wanted to study up on bees a little, as I have always been somewhat interested in them; but I was very much surprised to find something in GLEANINGS that helped me so much in my Christian life that I am constrained to write this letter, and let Bro. Root know that there is one railroad man, at least, who is praying that God will continue to use him, and make him a blessing in the future as he has done in the past. I refer to the Home Papers, which, it seems to me, are the grand feature of the book. How good it is to have a business, and run it in the interest of Christ and his cause! I have been a Christian since Dec. 3, 1876, and now I am encouraged to be a more faithful soldier of Jesus Christ. There is that in Bro. Root's writings that helps us business men to carry our religion into our business. They are very practical, and that is just what we want.

My friend J. J. Ochsner has over 100 hives of bees, and I have one, which I bought of him this spring to experiment on. The bees are doing well. The spring was very cold and backward here; and when the dandelions first began to display their gold, many hives had not a pound of honey in them; but since white clover began, every thing has been very favorable, and now the hives are as full of bees and honey as they can stick, and a good surplus is being stored. Owing to abundance of rain, the white-clover season will last at least two weeks longer than usual, and we think will continue fully until basswood, which is almost ready. I hope soon to join your A B C class, and become one of the family; and if I am not disappointed, I expect to spend my vacation next month at my father's farm in Ohio; and then, if I can slip away from mother for a few days, I will visit Bro. Root's bee-farm, and attend the noon prayer-meeting. HARRY LATHROP.

Prairie du Sac, Wis., July 9, 1883.

[Many thanks for your kind words, friend L.; and when you call to see us, be sure to let us know that you are the man who wrote that letter for the JUVENILE, and then we shall be sure to know you. Thank God that there are at least a *few* railroad men who are in the army of the Lord.]

Juvenile Gleanings.

JULY 15, 1883.

Contents of this Number.

Anti-Tobacco....................423
Australia 414
Bell-ringing 419
Bees, To Resuscitate.........420
Cells under a Hen.............421
Covers, Leaky...................421
Cow Convention...............416
Drone-Cells, Curious........421
Easterday's Fdn. Machine..418
Editorials 426
Harrison 415
Hives, Dollar....................420
Honey, First-gathered......416
Honey-stand, New..... ...417
Ida's Letter........... 415
Jessie's Letter.................417
Kangaroos 414
Kind Words 423
My Neighbors 411
Pelham Fdn. Machine.......420
Pollen, White 421
Sw'g and Sunday-schools...420
Toads..............................420
Virgil...............................413

Art thou for us, or for our adversaries?—JOSHUA 5:13.

THOSE desiring the blank books referred to by Mrs. Gray in Our Homes this month should address "Headquarters W. C. T. U., Y. M. C. A. Building, Cleveland, Ohio." Some have written us that the address then given was not full enough, and hence we give it in full.

ORDERS are now all filled, very nearly up to date; and with the large force we have at work, we hope soon to be able to say they are *clear* up. Last week we sent out 600 smokers in five days, and this did not quite fill all orders, even then. Who could have supposed that the smoker business would have assumed such proportions? We are a little behind on extractors, fdn., and sections; but almost any thing else can go about as soon as the order is received.

D. A. JONES, Beeton, Canada, has sent us his "Circular and Price List" for the spring of 1883. It contains 48 pages, 4 x 7. In his interesting remarks about terms to students, we find the following plain English relative to the personal habits of apprentices at his bee-farm:

> The use of intoxicating drinks, tobaccos, and profane language, is prohibited. These are unnecessary elements in bee culture, and will not be tolerated.

It is gratifying indeed to see such an influence as that which friend Jones exerts, thus resolutely on the side of correct habits. It strengthens us all.

UNTESTED QUEENS.

FOR the present, we shall pay $60.00 a hundred for untested queens; and we expect to ship them promptly by return mail, guaranteed, postpaid, at the old established price of $1.00 each. We can furnish you queens of any grade as soon as the order is received, with the exception of select tested and select imported. We have plenty of imported queens on hand that are select in every way except color, and are probably just as good as any. An importation of 50 more is now on the way, and we expect them daily.

ADDITIONS TO ORDERS.

SOME way our business is, of late, getting into a shape so that the many friends keep continually sending additions to orders previously made. Now, we have no objections to this, only that, during this busy season, it keeps one clerk pretty busy to find out whether certain orders have gone or not; and as the mail, express, and freight are in the hands of different departments, it will aid us greatly if you will state, when making additions to orders, which way they were to be originally shipped.

I TELL you, friends, we have had a boom since you last heard from us. Instead of a slack-up about the Fourth of July, as we usually have, business seemed to go all the other way this year. When overburdened clerks got sick, and had to take a rest, new hands were pressed into service to fill up the ranks; and, as a consequence, more tangles and misunderstandings arose. Quite a lot of them are probably unsettled yet, although most of the orders have been filled. In order to place the things in your hands when you needed them, we have divided orders, substituted, and done almost every thing that we in our judgment thought to be the lesser of two evils; and in the absence of old clerks who could explain intelligently, a good many things have been sent without explanation. Do not be uncharitable enough, however, to let the idea get possession of you that we do not intend to explain, and fix every thing as near right as can be. Where money was coming to *me*, I have passed it by for the present a good many times, preferring to give attention rather to those cases where money or goods were due somebody else; for I would much rather lose myself, than to have any of you suffer, where I was obliged to choose between the two. We have now a short-hand writer in our office (besides one in the type room), and if you will tell us what is amiss, I will try, through him, to make things right—or, at least, tell you that we are disposed to make them right.

I WONDER if all of our little friends are enjoying their vacation. Now if you will let me advise, I feel sure you will enjoy it better if you have something to do. There is almost always some work that children can do where bees are kept. They will enjoy their play a great deal better if they have work enough to do until they are just a little tired. We find some of the children in our factory who seem to consider their work as play; and they seem to prefer work to play when they can have their choice; and then where they work, every Saturday night they have their wages in the shape of clean dollars or half-dollars. We have them here as young as ten or twelve years; and on some kinds of work these little chicks will do as much, and do it better, than a grown man or woman will. Isn't that funny? You ought to see them now, busily at work making queen-cages, cages to send bees off in, tying up frames in bundles, putting frames and sections together, picking and shelling peas, etc., etc. You see, here in our factory everybody, or, at least, almost everybody, commences when he chooses, and stops when he chooses. Some of the children are here with their dinner-pails, as early as 5 o'clock in the morning; and then, perhaps, toward night they get tired, and stop early, and have a playspell; or if they choose, they can stop any time during the day and have a rest. If they get hungry or thirsty they can go down to the lunch-room and get any thing they choose, by paying for it. Thus, you see, they are in the habit of doing business as men and women do, and men and women they are, on a small scale. We endeavor to give them the utmost liberty consistent with doing their work properly. There are no rules or regulations to be observed that I think of now, except against swearing, drinking, and tobacco. I believe they generally consider me quite an easy man to work for; only some of the boys think I am terribly hard about tobacco. But I am sure they will all thank me for it when they grow up. In fact, a good many have thanked me already for being the means of causing them to break off from the use of tobacco.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany....453
Bee Entomology....468
Blasted Hopes....467
Editorials....473
Forgettery....467
Heads of Grain....456
Honey Column....432
Humbugs and Swindles....453
Ladies' Department....465
Notes and Queries....467
Obituary....448
Remindery....—
Reports Encouraging....466
Smilery....468
The Growlery....—
Tobacco Column....472

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

A B C's Troubles....437
Absconding, To Prevent....461
Apiary, Floating....474
Apiary, The Bachelor....459
Apiary, To Build up....453
Apiary, A Successful House.468
Apiary, Our Own....448
Apiary, La Fe....452
Attachm's bet. Upper and Lower Story....437
Banner Apiary....433
Basswood....451, 456, 462
Bee Disease, A New....461
Bee Culture on Old Plan....459
Bee-man, An Old-style....456
Bees, How Far they Work..464
Bees, Uniting....463
Bees, Foreign....457
Bees, How Many in Hiveful.458
Bees, Speed of....456
Bees, Length of Flight....443
Bees, Prep. for Shipment...440
Bees, Uniting....456
Bees on Lilac....467
Bees and Temperance....462
Bees in Woods....467
Bees and Sunday....447
Bees Hanging on Outside...460
Bees Carrying Leaves....457
Bees after Honey Season..440
Beginner's Troubles....438, 443
Blood's Device for Bars....443
Boardman's Portrait....437
Burr-flower....453
Clarke, W. F....458
Clover, Sweet....451
Clover, Big Yield.... 459
Combs, Attachment of....438
Convention, Toronto....453
Crooks' Report....458
Cyps and Holy-Lands....438
Doolittle....450
Drones, Where shall we get.462
Drones, White-headed....460
Eggs, Bees Stealing....457
Entrances, Upper....441
Entrances, Extra....449
Fdn., Questions About....459
Fdn., Drone, for Sections...445
Feeding, Judicious....453
Figwort....451
Flanagan's Visit....474
Florida....463
Foul Brood....446
Fr's, Wired, for Nat. Combs.457
Harrison's, G. W., Letter....454
Harris' Letter from Ga....445
Heddon's Combined Case...445
Hiving Bees Five Times....447
Hiving where they Cluster.447
Hives, The Wood for....439
Hives, Economy in....447
Hives, Mrs. Cotton's....465
Hive, Working for Extr'r..441
Honey from Apple....456
Honey, 24 Tons in 1883....439
Honey Vinegar....467
Honey in Old Apiaries....455
Honey for Bites....460
Honey, New, by the Ton....455
Horsemint.... 468
Hound's-Tongue....454
Hybrids, Handling....438
Ital. Queens in Log Gums...460
Langstroth's Letter....441
Mosquito-hawks....463
Peace in Affliction....462
Pollen, White....467
Pond's Apology.... 464
Queen-cells, how Destroyed.461
Queen Stinging Workers....456
Queens that are not Queens.468
Queens, Cost of Importing. 468
Queens, Two in a Hive..440, 449
Queens, Color of Imported..463
Queens, Clipped....450
Queens, To Catch....463
Queens Wrong End up....464
Sections Partly Filled....462
Secs., To Tell when Filled...458
Simp. Hives, Two-story....437
Smoker, Our Cold-Blast.... 473
Sunday Swarming....467
Swarms Clust'g Together...450
Swarms, New, Absconding..456
Swarms, Two in a Hive.... 473
Sw'g without Clus'g....458, 464
Swarming in the Rain....458
Swarming when Cloudy....467
Taylor, R. C.... 449
Trains, Speed of....435, 464
Viallon's Apiary.... 435, 436
Wax-raising, Artificial....457
West Indies.... 452
Wilkin's Report....439
Wintering in Tennessee....439
Wood-borers....459
World, Seeing the.... 444

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*Chas. R. Mitchell, Hawkinsville, Pulaski Co., Ga. 7tfd
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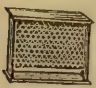

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Louisville, Ky., June 20, 1882.
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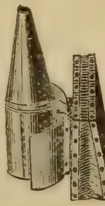

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Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have; but at last I am "boss;" Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham & Hetherington.

Respectfully, G. M. DOOLITTLE.

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I keep on hand, and can ship from the factories where made, a stock of Farm Implements, a two-horse corn-planter, with drill attachment; one-horse corn-drills that will plant in hills; a steel-toothed harrow in three sections, with lever to clear from trash, or pass over obstacles; spring-tooth harrows; common harrows, with 40 or 50 teeth; sulkey hay-rakes; sulkey cultivators, plow-sulkeys, etc. Send for Circular. tf

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SEND postal for my 20-page price list of Italian, Cyprian, and Holy-Land Bees, Nuclei, Queens, and Apiarian Supplies.
4tfd H. H. BROWN, Light Street, Col. Co., Pa.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

Cleveland.—*Honey.* — New honey is beginning to come, and with it a fair demand is noticeable. Best white 1-lb. sections of the new crop sell at 18 to 20 c.; no 2-lbs. new received. Old 2-lb. sections are selling at 15 cts. Old extracted, in bbls., has all been closed out at 8 to 9 cts.
Beeswax, none in market. A. C. Kendel.
Cleveland, O., July 19, 1883.

Milwaukee. — *Honey.*—The first receipts of new comb honey within the past day or two are very fine, and sold at 20 cts. per lb., readily. The old stock is well cleared off, only a small quantity of poor and dark left; hence quotations for choice may be considered for new. Comb, in small sections, 19@20c. Comb, in large sections, 16@18c. Extracted, in cans, 11@12c. A. V. Bishop.
Milwaukee, Wis., July 16, 1883.

Detroit. — *Honey.*—The honey market is still unchanged and lifeless. A good article is quoted at 15@16 cts.; but little is offered, and almost none wanted. *Beeswax*, scarce and firm at 28@30 cents.
Detroit, Mich., July 24, 1883. A. B. Weed.

Cincinnati. — *Honey.*—The demand for extracted honey is very slow for the last two or three weeks. Only occasional sales are made. Arrivals are bountiful, a large crop having been raised all over the country. It brings 7@9 cts. on arrival. Prices may be brought to a point from which they will be hard to recover. Comb honey brings 14@16 cts., with no demand. Arrivals of *wax* are fair, and demand is good at 32 cts.

Please state that we are of 2-lb. square honey-jars of green glass, and that we will have a new supply after Sept. 1st. We have a full supply of flint jars, which are only $1.00 higher per gross than jars of green glass. Chas. F. Muth.
Cincinnati, O., July 21, 1883.

Chicago.—*Honey.*—The new crop is coming into market very freely for the season of the year. Sales are being made at a wider range of prices than usual; 1-lb. comb, when perfect, 18c.; imperfect, 15@17c.; 2-lb. combs, 15@16 c.; Extracted is slow sale at present, owing to its being in many instances unripe. Sales at 8 and 10c. *Beeswax* 30@35c.
Chicago, Ill., July 26, 1883. R. A. Burnett.

I have for sale one barrel of fruit-blossom and clover honey, and three barrels of white-clover and basswood. It is ripe and nice. If you want it, send barrels, and I will pay freight one way.
St. Johns, Mich., July 26, 1883. M. S. Pray.

I have for sale a fine lot of clover and linn honey, crop of '83; honey warranted of best quality, and well ripened. Price 10 cts. per pound.
Ada, Ohio, July 20, 1883. J. B. Murrey.

I have for sale some extracted honey of different grades, and also some white-clover and basswood. How much do I hear for it? O. L. Miller.
Delta, O., July 26, 1883.

Would you want any honey? If so, what will you pay? I have got nearly a barrel.
Delta, O., July 24, 1883. Herman Miller.

[We have all the honey we can dispose of at present, friend H.]

I have 2½ barrels of honey on hand which I want to sell. It is fall honey. My health is so poor that I can not do much business. I will deliver it on board the cars at Pewamo for 8 cts. per lb., or less, if it is not worth that; 1 full bbl., 3 half-barrels.
Sethton, Mich., June 4, 1883. D. Gardner.

Five hundred pounds white-clover honey for sale in 100-lb. tubs. Address Wm. DeWorth.
Bordentown, N. J.

Who can deliver me about 10 gallons of pure extracted white-clover honey here the cheapest? Would like to see sample. No extracted honey around here. Want to give it a retail trial in our (Keller & Kline) store. Henry Keller.
Wrightsville, York Co., Pa., July 17, 1883.

Wax is now down to 28 cts. cash, or 30 cts. trade; and fdn. after Aug 1st, will be at the same price it was before it went up on the 14th of March at midnight. I presume it will be safe to let the price down without any such "ceremony" as we had in raising it up. Average wax for sale at 34 cts.

Who has not been troubled by tipping over his ink-bottle? We have just got some neat strong ones made of glass; they hold ink so you can easily get it with a pen as long as there is a drop in them. You can not spoil the pen by pushing it to the bottom, either, for the point touches a rubber cork. And when you want to shut it up to keep the dust out, just set it upside down. If you want to give it to the baby to play with, you can do so, and it wont hurt him, nor will he hurt the ink. Price 35 cts.; by mail, 50.

One of the bee-friends, whose name I have forgotten, has invented a most ingenious letter-clip, or file, for papers. It will file any number of papers or letters in regular order, according to the dates received — holds them securely, and yet you can in an instant open it like a book, separate any letter without tearing or mutilation, and when you are through with it you can put it back in its place, and you don't have to lift those over it off from the wires either. It is a most convenient thing for any one who has much correspondence, and wants to keep his papers in proper order. Price 50 cts.; by mail, 16 cts. more. We have purchased a lot for our bee-keeping friends. We will have an engraving of it next month.

HONEY LABELS.

Labels for Extracted Honey, size 3x4, ungummed, in blue and bronze, or in two colors, 1000, $2.25; 500, $1.50. Same, gummed, 1000, $2.50; 500, $1.75. White paper, black ink, 1000, $2.00; 500, $1.50. Labels for Muth honey-jars, same price.

Labels for sections, gummed, 2 colors, or blue and bronze, 1000, $2.15; 500, $1.60. Ungummed, 1000, $2.00; 500, $1.50. Black ink on white paper, 1000, $1.75; 500, $1.25.

Labels 1¼x2¼, gummed, 250, 50c; 500, 75c, 1000, $1.00. The above prices include your name and source of honey.

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GEO. M. GRAY, MEDINA, O.

Our friend "George" has, as you see, "swarmed out," and started a shop for himself. We take pleasure in recommending him to our bee-friends. A. I. Root.

DOOLITTLE

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Untested Queens (Italian) 1.50

The tested are in every respect such as I use for breeding purposes. If you want a first-class queen, address

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BEE CULTURE.
DEVOTED TO BEES HONEY & HOME INTERESTS
F.R.Whiting

Vol. XI. AUGUST 1, 1883. No. 8.

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NOTES FROM THE BANNER APIARY.

NO. 45.

MR. ALLEY'S BOOK ON QUEEN-REARING.

MR. ALLEY has very kindly sent me his new book, "The New Method of Queen-Rearing;" and, with his consent, I will tell what I think of it. It is well bound, well printed on good paper, and well illustrated; but I consider the price too high. One dollar would be about right. Mr. Alley uses small frames, about 5 inches square, for his nuclei. For one reason, I should like this, as there would be more spaces *between the combs*, for the amount of comb used, than if larger combs were used, and thus fewer bees could care for more brood; but, aside from this, I should not like the arrangement. I can never consent to have two sizes of frames in one apiary; it brings in too many "traps and calamities." To get these small frames stocked with bees and brood is too much trouble; and to get the bees back into full colonies, upon large frames, in the fall, is too much trouble. Mr. A. tells us how to stock these nuclei by driving the bees from a *box hive*, cutting up the comb and fitting it into the small frames. A pint of bees is given each nucleus, and they are confined 48 hours. How he gets bees and brood for them when frame hives are used, he does not say. Does he proceed in the same manner? How much neater and quicker it is to simply take full-sized frames filled with brood, and covered with bees, and carry to the nucleus hives! I was almost persuaded last winter to adopt Mr. Heddon's style of nucleus (see page 74); but as I thought it all over while on my homeward trip, I concluded it was "too many oats for a shilling," and that when I had to use a different-sized frame for my nuclei than I did for my full colonies, I should quit the business. When full-sized frames are used, the nuclei can be made quite strong, and will store considerable honey. If in a locality where there was but little honey to gather, and queen-rearing was made a specialty, there would then be some excuse for using small frames for nuclei; but even then I would have *all* my frames about 8 in. square.

Mr. A. keeps his breeding queens in miniature hives, as he considers the risk of killing them, in securing eggs as too great, if kept in full colonies. One must be very careless indeed to kill queens while securing eggs. I have yet to kill a queen while handling the bees. He objects to taking eggs from standard combs, as it mutilates them. Of course, it does; but the bees soon fill the holes again.

Mr. A. places much importance upon the ease with which the *exact* date of the laying of eggs can be determined when the queen is kept in a nucleus. With his method of queen-rearing this is of importance; but where a lamp nursery is used, and the cells are removed 3 or 4 days before they hatch, it amounts to nothing. He says that a queen is almost certain to lay *at once* in a comb inserted in a nucleus, while it may be 3 or 4 days before she lays in a comb inserted in a full colony; and, to a certain extent, I agree with him. I keep the colonies containing my breeding queens rather weak, and well supplied with empty combs; thus the queen is almost certain to be laying in *some* of them. I sanction his advice to use strong colonies for cell-building, Instead of drumming out the bees, taking away the queen, keeping them shut up 10 or 12 hours, and then giving them eggs, I prefer taking away their queen and unsealed brood, and then giving them a comb of eggs, the oldest of which are just beginning to hatch, cutting a few holes to give the bees better opportunities to build cells. I doubt not but that friend A. rears *good* queens by his method; but there is too much "fussing" about it, and I don't wonder that he can not afford to rear queens for $1.00. It would be less work to rear queens under the "swarming impulse" than it would with the Alley method; and queens reared under the swarming impulse are usually considered good enough for anybody.

Friend A. has his cells built in rows. Now, this is convenient, I admit; but with me it would "cost more than it comes to." I do not destroy more than a dozen cells, by cutting them open when built close together, in rearing 500 queens. Are those dozen cells worth all the "fuss and bother"? I put the frame of comb upon which the cells are built into the lamp nursery, let the young queens hatch out when they get ready, and then introduce them to nuclei. By examining the nursery every hour or two during the day, and holding the cells up to the lamp light, about 9 o'clock P.M., and putting each cell that shows signs of hatching, in a cage by itself, not more than another dozen of cells are lost in rearing 500 queens. Perhaps friend A. would consider *this* too much "fussing;" but no more, I fancy, than his plan of cutting out cells and putting them into a queen nursery in the center of a colony of bees. His advice to feed when forage is scarce is good.

He condemns lamp nurseries in unmeasured terms, calls them artificial devices, and adds that, "When one digresses from the paths of nature, in this business, the more unsuccessful will he be." How would this method of reasoning apply to friend Alley's method of queen-rearing? What one step in his method is *not* artificial? Do not infer that I think his method will produce inferior queens; for, as I have said before, I think it *will* produce *good* queens; but to argue that some method is inferior because artificial, when the methods advocated are also artificial, is, to say the least, inconsistent. My lamp nursery contains four pailfuls of water; is kept in a close room on the north side of the shop, and I can control the heat so that it does not vary 5°. The heat inside a bee-hive varies much more than this, as I have learned by placing a thermometer in the hive.

I agree with friend A., that virgin queens can be introduced to both nuclei and full colonies, as I introduce hundreds of them every season; but to leave the bees queenless *three days* before introducing the queens is unnecessary and unwise, *unless* no honey is coming in, and then it would be advisable to feed; and then, as when honey is coming in, virgin queens can be introduced at the same time that the laying queens are removed; at least that is my experience, and the three days' time gained more than compensate for the occasional queens that will be killed.

Friend A.'s assertions, that his queens are "reared in full colonies, and *none are ever queenless*," is misleading, to say the least; for the colonies *are* queenless while building queen-cells. I like his plan of allowing the same bees to build only one lot of cells, and then shaking them down in front of a hive containing the combs from which the bees have just been removed for cell-building, and then giving them the queen from this same colony.

The queen progeny of some queens, so says friend A., is much more liable to be lost when upon their "wedding trip" than that of others. This is something I have never noticed; but if such is the case I can readily see its importance. He places great importance upon leaving none but the best of drones in the apiary. With this I heartily agree. I also agree with the following: "An inferior queen, in gnawing through, leaves a little ragged hole, instead of cutting a large clean cap." Friend A. says that queens of medium size are generally best; that color or size has no effect on their fertility; that an experienced breeder can judge of the quality of queens before they hatch; that cells having a blunt point and thin walls generally contain poor queens; that queens that delay long in becoming fertile will not prove of first quality, to all of which I agree. Friend A. considers the Syrians the best for cell-building, and the Italians the poorest, and I shall not dispute him. I also agree with him in thinking that queens should be reared from the egg. Friend A. gives some excellent hints in regard to the care required in handling queen-cells; in fact, it is the best advice upon this subject that I have ever seen. Several of "us breeders" have noticed that queens taken from full colonies do not bear transportation so well as those taken from nuclei, and that queens that have been caged a day or two also go safer; well, friend A. has tried caging the queens from full colonies in his nursery a few days before shipping, and has found it an advantage.

He thinks tested queens should be tested for the qualities instead of the "stripes" of their progeny. Here, again, we agree; but when he condemns "dollar queens" in such severe terms, we do *not* agree; but I have not the space here to go into any argument upon the subject; besides, I have time and again given my views upon this subject. He says, "Clear honey can not be safely fed, no matter how much precaution is taken, and should not be used, even though the honey costs nothing, and sugar fifteen cents a pound." He gives this advice because honey incites to robbing, more than does sugar. Perhaps, with his small nuclei, each one of which contains a handful of bees, this advice is all right; but I have several times fed diluted honey in the open air, and I have yet to have a nucleus hive robbed.

Under the heading of "Who should keep bees?" friend A. says: "People who are incapacitated from hard labor; men well advanced in years; clergymen; doctors, lawyers, and ladies;" he also says, "The business can also be well adapted as an auxiliary to some other light employment." As a comment upon the above, read E. E. Hasty's article, "Popular Misapprehensions in regard to Bee Culture," p. 370, July No.

In many of friend A.'s operations, tobacco smoke is used. I do not know that any harm results from its use; but I *do* know that I have never used it, nor had any occasion to use it.

FRIEND ALLEY'S PART OF THE BOOK

occupies a little more than two-thirds of the volume, the remainder of which is occupied by essays by Geo. W. House and Silas M. Locke. Of course, with my limited experience in the production of comb honey, it is presumptuous in me to criticise Mr. House's essay; but I will venture to say that, were I obliged to follow the method laid down by Mr. H., my experience would remain *right where it is*. Friend

Locke discusses upon "The New Races," and considers the Syrians the best. I have never tried them, and hence will say nothing.

Although disagreeing in many instances with friend A., yet, could I visit him, and see him putting his methods in practice, I might think better of them; but, be that as it may, I wish him success, and advise bee-keepers to get his book, and read it, as it contains valuable hints. W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., July, 1883.

BEES AND RAILWAY TRAINS.

DO BEES FLY 90 MILES AN HOUR?

I HAVE been very much interested in the articles in GLEANINGS relative to the wing power of our little pets; and from some little experience of my own I am inclined to side with friend Doolittle. Having occasion to visit Cincinnati a few days ago I concluded to take some bees along, and, if possible, test the ninety-mile theory. Accordingly I caged about a dozen, and boarded the fast day express, scheduled at forty miles per hour. Going into the baggage car, the "smasher," being an acquaintance, agreed to assist me in the experiment. We took some oil cloth and covered the side and rear windows, leaving the front window open; and going to the rear of the car when the train was making a speed of not less than 45 miles per hour, being a little late, turned one loose. The little fellow circled around a few times, apparently bewildered, and then made a straight shoot for the front window, in as little time, seemingly, as if the car were standing still; others would circle back, but reach the window from 10 to 15 seconds — the light having been shut out by covering the side windows, no light appearing except at the front window, which, of course, caused the bees to fly in that direction (according to my thinking). Now, they would certainly have to double the speed made by the train to reach that window, and those that circled back so much would be compelled to fly three times as fast. We now went to the rear of the train and turned the rest loose, some flying the same direction as the train, while others were left in the distance. Now, I must beg to differ from Mr. Ewing's statement on page 314, June GLEANINGS. With due deference to his opinion, I am not satisfied with his explanation as to bees keeping their positions over the train, and he must be mistaken. A train does not cause a vacuum overhead during its speed, no difference how fast or slow. Vacuum exists only underneath and at the rear of a train of cars. If Mr. E. doubts this statement, let him get on top of a fast freight train, and ride on the rear car, then let him turn his hat loose (especially if he wants to buy a new one), and see if the vacuum will cause it to follow the train, and I think he will come down hatless. Then he may tear some paper in small pieces, and see how quickly they will disappear in the distance behind; and for safety sake I would advise him to hold fast to something while making these experiments, or he himself will be blown off behind. I have railroaded for 11 years, and this is my experience: Paper and light articles will follow underneath a train, and within two feet of the track, in the rear, by suction, or vacuum, but never overhead; I am of the opinion that Mr. Elwood's bees followed overhead the train altogether by their own exertions.

Somerset, Ky., July 10, 1883. A. T. SHOTWELL.

I am very much obliged indeed, friend S.; but did you fly the bees *inside* or *outside* of that car? In regard to the vacuum, or, more correctly, the *partial* vacuum produced by the movement of a train, I am inclined to think you are correct in that also, although when the matter was first suggested I did not stop to consider it very carefully. There seems to be more credit due to the bees than we supposed when the subject was first taken up.

VIALLON'S APIARY.

ONE OF THE ENTERPRISING BEE-MEN OF THE SOUTH.

WE take pleasure in showing you, on the opposite page, a beautiful sketch our artist has given us of the apiary of friend Viallon. I hardly need tell you that friend V. is not only one of our most wide-awake and go-ahead bee-men, for I presume you all know it already; but, what is still more to his credit, that, although perhaps he has done as large a business in rearing and selling bees and queens as almost any other man in the world, no one has yet, so far as I can remember, ever written a word of complaint in regard to his ways of doing business. We also append a description from Mr. Viallon himself, which accompanied the photograph. And in another article, written by friend Flanagan, we have some additional "sidelights," as it were.

My nuclei are in a row along the fence, and two rows opposite; and if you look well you may see some of the nuclei; though the pickets obliterate them a little. If all the hives in front of the honey-house had been painted white they would look better. My bee-hive factory is mostly hidden by the trees, but you can see a part of it. I am glad to hear that you were pleased with the photograph; but I don't see why you should go to the expense and trouble to have it engraved, as there are so many others having better-looking apiaries than mine. At any rate, do as you please, my friend, and may God bless you and family for your kindness to all of us. P. L. VIALLON.

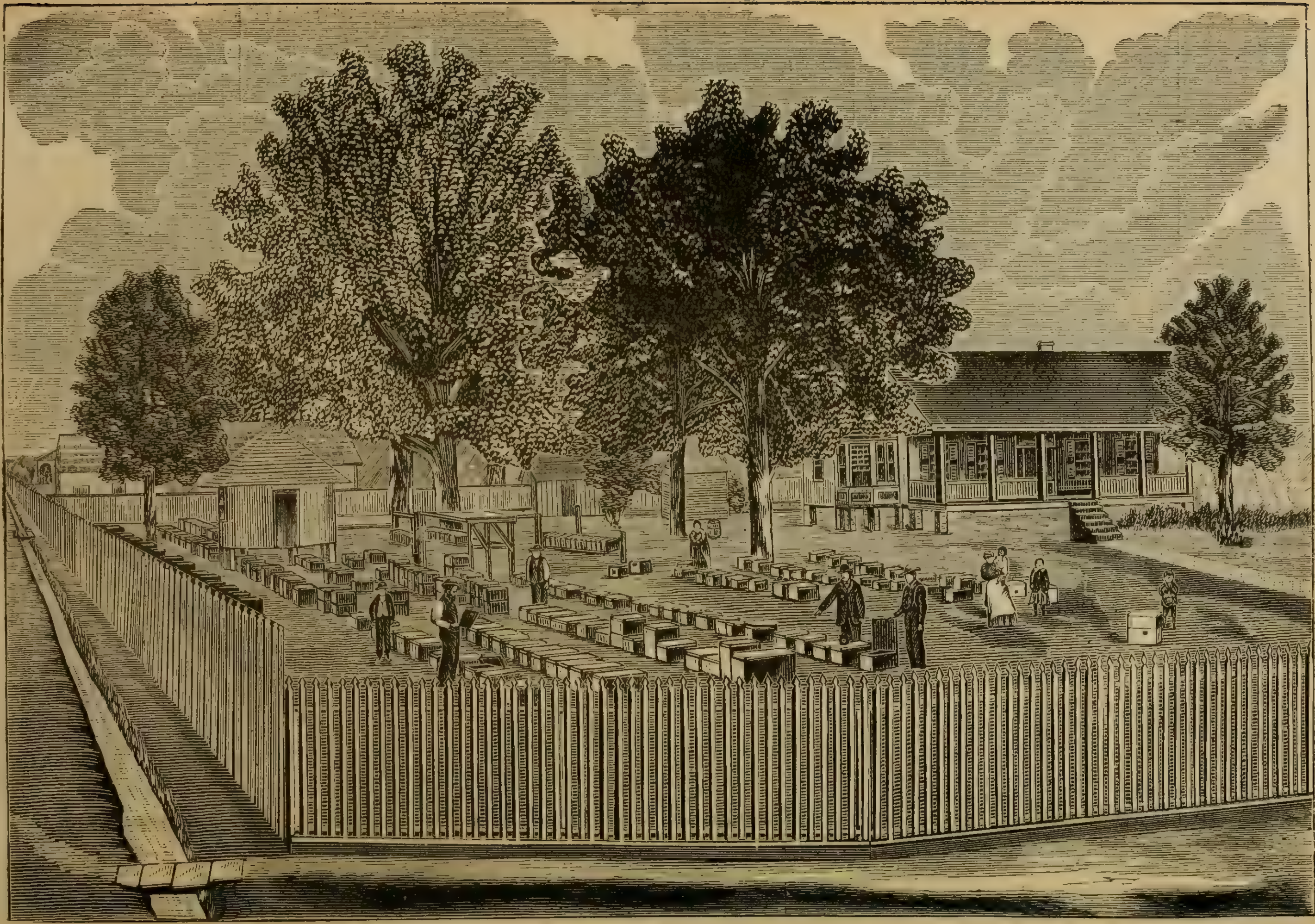
Bayou Goula, La.

Below are a few words from one of our hands who has been with friend V. for toward a year past.

The cut shows the apiary and home of Mr. Paul L. Viallon, of Bayou Goula, La. I am aware that many readers of GLEANINGS will cast careless glances at this little plate, while others, who have become acquainted with or visited Mr. Viallon, will say not half has been told. This picture is very dear to the writer, because of the beauty of the place; dear, because of the loving, kind hearts of the occupants; and doubly dear, because it has become the home of his only son, J. M. Olin, who has the charge of the large and extensive apiary, which is situated above New Orleans, and has a fine view of the Mississippi River. The beautiful shades are live-oaks and tropical fruit-trees.

This photograph was taken about the last week in January. The number of stands at that time was between 400 and 500. After sojourning with them for the past 8 months, and noting the thrift and shrewd management, I must say, "Excelsior!" Mr. Viallon is every bit a true Southern gentleman. The most of us know something of Southern hospitality, and we truly realize it when we visit him.

Medina, O., July 26, 1883. J. C. OLIN.



P. L. VIALLON'S APIARY, BAYOU GOULA, LA. FOR DESCRIPTION SEE PAGES 435 AND 474.

THE MAN WHO WINTERS HIS BEES WITHOUT LOSING ANY.

241 COLONIES THROUGH THE WINTER OF 1882-'3, AND NO LOSS.

LAST spring we received the following postal card from a bee-keeper in one of our neighboring counties:

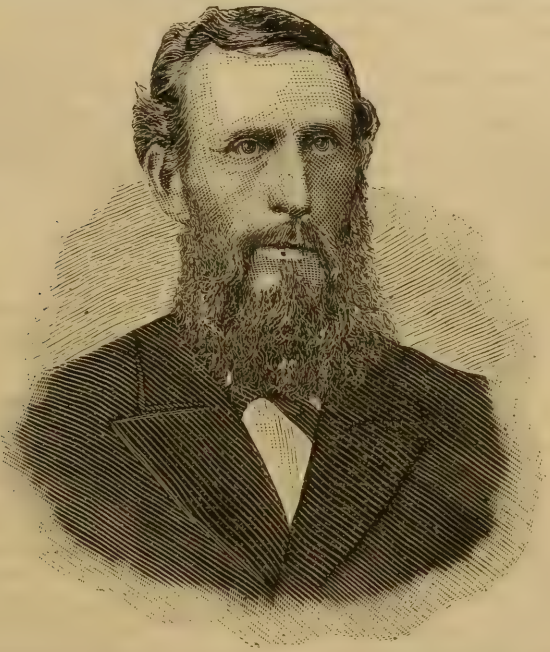
> If you would like to see how the man looks who winters his bees successfully, I will send you his picture. Two hundred and forty-one colonies in good condition, without the loss of a colony.
>
> H. R. BOARDMAN.
>
> East Townsend, O., Apr. 23, 1883.

Of course, we replied at once, "Do so by all means, friend Boardman." And so you see, friends, we submit you his picture above: I confess, friends, I expected to have prepared a little personal history of friend B. before his picture was received and sent to the engraver's; but it was not attended to, and all I can tell you is, that he has been an enthusiast on bees for a good many years. Of late he has a sort of queer fashion (?) of wintering his bees every winter with no losses. If I am correct, he did have, eight or ten years ago, some experience in Blasted Hopes, like the rest of us. I think he winters principally on natural stores.

He writes again later as follows:

> The bees are all right to date, *without loss*, and in fine condition. H. R. BOARDMAN.
>
> East Townsend, O., May 21, 1883.

So I presume that he has escaped the spring dwindling that so many of us have in May. He paid us a visit but a short time ago, and I had some conversation with him; but the roar of business has driven it pretty much out of my head. Will friend B. please to tell us a little more about how he does it? and a word or two from some of his neighboring bee-men might give us some "side-lights" on the matter. Now do not be bashful, friends, but let us know all about it, that we may be able to "do so too."



H. R. BOARDMAN, THE MAN WHO DOESN'T LOSE HIS BEES IN WINTER.

AN A B C SCHOLAR'S TROUBLES.

HE ASKS SOME QUESTIONS.

AS I am under the impression that, as the season of furnishing hives is about over, you may have a little spare time to answer a question, I promise that I will ask as few as possible. I had a couple of hives of bees, and got 4 hives from you, one of which I put over another, making a 2-story hive of my first swarm, and got two more swarms, so that I have now five. I got your A B C, but, like all other scholars, learning from books alone without practical suggestions from a teacher, is slow and *painful*, and sometimes unsatisfactory; although I have learned a great deal from your book, which, for the amount of money it costs, and the simplicity of its arrangement, I consider the best compendium of bee knowledge I ever saw.

SIMPLICITY HIVES, TWO STORIES; ATTACHMENTS BETWEEN UPPER AND LOWER STORIES.

In the two-story hive, I find that the "blessed bees" have built up from below, and attached their combs to the frames above (in the second story), so that I can not move them. Will it be advisable to take off the entire second story? and how can I prevent them attaching the upper frames to the lower?

Friend B., this is a matter that has been very fully discussed; but there seems to be room for discussion on it yet. If the hives are so made that the space between the upper and lower frames is not more than ⅜ and not less than ¼, most colonies will leave this space and build in comb between. There are, however, exceptions. While going through the apiary yesterday I found that I could lift almost all of the combs easily in the upper stories; but once in a while I would find a colony where every upper comb was attached to the one below it, so that when I attempted to raise one I raised both. The sheet of perforated zinc, illustrated in our price list, will probably remedy this. But if I were working hives for extracted honey, I should prefer to get along without it if I could. I think I would leave all colonies without this sheet of zinc, that would not attach the combs. Where they persist in so doing, I would scrape the wax from the top and bottom bars, and put in the sheet of zinc.

ATTACHMENT OF COMBS.

In these new hives I find that the frames are crowded, although I have fewer frames in than you forwarded in the hives, and they built so that two frames are sometimes attached to each other. How can I prevent their attaching two frames together? and how many frames shall I put into a Simplicity hive?

Bees, as a general thing, bridge their combs across from one to the other, more or less; and a beginner is almost always sure to think these attachments prevent the combs from being movable. Such, however, is not the case. When you wish to lift out a frame from a full hive, select one of the central combs, and one containing considerable brood. Now move the combs on each side a little away from it, until the attachments are broken. You can now raise it carefully without any danger of injuring the combs or killing the bees. If a hive has not been opened for some time, and the bees build the combs all together solid, apparently, it may be best to move nearly all of the combs a little, so as to make room for the one you wish to take out. Much depends on the combs being straight and true. Also where the combs are bulged, by leaving the bees some time without space in which to store their honey, the matter of opening the hive is rendered very much more difficult.

HANDLING HYBRIDS, ETC.

From the way the bees sting and go for me, I should judge, after reading your article, that they are hybrids. Now, I am not sufficiently expert yet to introduce Italian queens and remove the hybrids, and do not want to go to the expense of buying new bees, Italians, and disposing of my present stock. Can I, by getting an Italian nucleus, raise queens sufficient for my hives, so that I can introduce them next year, when I shall have more practice? and can I add to this nucleus, frames with brood from my present stock without danger of hybridizing the nucleus?

Even if your bees *are* hybrids, you should be able to handle them without being stung. Use smoke, and a little more care, and never mash a bee. You can easily build up a nucleus to a full colony by giving them combs of brood; and even if these combs do come from hybrid stocks, I should not think it would matter materially.

CYPRIANS AND HOLY-LANDS.

Are Cyprians or Holy-Lands any better than Italians? Are they less liable to be ferocious?

At present, all things considered, I am inclined to give the preference to the Italians over either the Cyprians or the Holy-Lands, although the latter have qualities that make them much more desirable than Italians. As a general thing they are not as easy to handle. Very likely a cross between the two races mentioned and the Italians will be found superior to either of the three races pure.

WAITING UNTIL I HAVE TIME.

If you have not time to answer all of the above queries now, lay them aside until you have leisure. I will not be offended. C. L. BAUMANN.

Dayton, O., July 14, 1883.

Friend B., I very seldom wait until I have more leisure. Experience has taught me that it is cheaper and easier to dispose of every letter I receive, when it is once in hand; for after I have given my mind to the consideration of any subject or letter, it is a waste of time to lay it down and then take up the whole thread again at some future time. My answers are often brief, but they are, I believe, as a general thing, pretty prompt.

SOME OF A BEGINNER'S TROUBLES.

REARING QUEENS, GETTING BEES TO WORK IN BOXES, ETC.

IN July No. of GLEANINGS you ask the question, "Has any one else had bees work on lilac?" I have lilacs in front of my house, and while they were in bloom, they were alive with bees all the time that was suitable for bees to work. I have a mixed multitude of bees, Italians, blacks, and mongrels, or hybrids. I did not observe which race worked on them the most (if there was any difference), as I supposed it a common occurrence for bees to work on them.

Has any one succeeded in raising queens on the improved H. Alley system? I bought a book, worked according to directions the best I could, with good faith, but got *not a cell*, and injured three of my best stocks very much by the experiment. I feel to exclaim with Josh Billings, "Egsperiuns iz a gud skule, but the tuishun iz purty hi." If I keep bees I shall need to raise queens, as the loss of queens seems to increase every year. I have had a greater loss this season than any one for thirty years.

My bees have done but very little thus far. Clover has yielded but little honey. We have had a great deal of cold rainy weather. Basswood is now in bloom, and to-day they seem to be doing a driving business. Still, they are very obstinate about working in 1-lb. boxes with tin separators. I have six broad frames in upper story, and one at side of brood-nest, and a frame of brood or a frame of fdn. in center of upper story. They will fill the frames of fdn., but never a bit the boxes. Now, Bro. Root, may the Lord bless you in the work he has intrusted to your care, and he surely will; for he has promised, "He that is faithful over a few things, I will make him ruler over many things." S. B. SEAMAN.

Harford Mills, N. Y., July 16, 1883.

I am very glad to hear that bees do work on lilacs, for I shall now have an excuse for having a little lilac garden on the honey-farm. Can any one tell us how many varieties of lilac there are? and can we not develop those that especially bear honey? I never saw or heard that bees worked on lilac till friend Cook called attention to it.—I hardly think, friend S., that Alley's system is at fault in any way, for very many of us have been working on almost the same plan for years. The same with the loss of queens. I think, after a little more practice you can raise queens just as surely as you raise chickens. I suppose you know some folks don't have any "luck" in getting chickens hatched. Neither do I think that the weather has been greatly to blame this season. An expert in almost any kind of business nowadays will succeed in spite of circumstances. Very likely you are right in deciding that separators are a detriment; but how can we get along without them?

A BRIEF REPORT FROM OUR FRIEND R. WILKIN.

1000 COLONIES OF BEES, AND 24 TONS OF HONEY.

I PRESENT to you, at his request, the compliments and report of Mr. R. Wilkin, San Buenaventura, Cal., with whom I was working through the month of June.

The season of 1883 has been, with us, a peculiar one. Early rains in the fall of '82 raised the hopes of farmers and bee-keepers. A great deficiency of rain-fall during the winter nearly destroyed them. The last week in March found the ground dry, the crops suffering, and the people fully expecting a dry year. A good rain about the last of March and the first of April, with showers in April, and the rare event of a heavy rain in May, again changed the outlook; bees began to prosper, increase, and store. This state of things continued till the latter part of June, when unusually hot weather suddenly put a check upon proceedings. While bees can easily gather winter stores after this, little surplus will be taken from them. Mr. Wilkin has 1000 colonies of bees, present count, in two apiaries. He has 720 colonies at his Sespe apiary, where he started with something less than 500 in the spring, and where there are upward of 2000 colonies within two miles of one point. He has 280 colonies at his Matilija apiary, where he started in the spring with about 190, and where fewer bees are kept. From the former apiary he extracted 15 tons of honey, and from the latter, 9 tons. If room would permit, would gladly enter at length into a description of the systematic arrangements at the Sespe apiary. I will only say, that everything works smoothly and perfectly. Mr. Wilkin uses an eight-frame extractor; i. e., one that empties eight frames at once. One person can run it easily, and I think it demonstrates the fact that time can be saved by emptying a larger number of frames than two or four. Mr. Wilkin both devised and constructed it.

Of course, in so large an apiary, various anomalies will occur, such as bees swarming with a virgin queen when they have an old clipped queen in the hive; bees swarming when they have only a caged queen (just introduced) in the hive, and finally returning, etc. But are we not disposed to make too much of these occasional circumstances, and state them in a way that would make a beginner think them liable at any time to happen? For instance, instead of every man who has ever known a swarm to leave without clustering acquainting us with the fact (and we have heard from many already), suppose that those who have known one per cent of all the swarms they ever saw to thus depart report to us, and we will see if the number does not decrease materially. I have known swarms to apparently leave without clustering, and then have found them clustered, after all, a long way from the apiary. While admitting that they sometimes go directly to the tree, I think that merely seeing them depart is not conclusive evidence.

I will add, that results at Mr. Wilkin's apiaries may be taken as a fair average for Ventura County, a few apiaries having done much better, and others not so well, according to location. A. NORTON.

Gonzales, Cal., July 10, 1883.

Many thanks for your report, friend N., even though it be a brief one. I have often wished for something more definite from friend Wilkin, and have, I think, said as much. I will gladly pay you, or any of his assistants, for information in regard to his bees, management, etc. If I am correct, 24 tons of honey is the largest crop ever reported by one man. If anybody else remembers its equal, let him stand up. I am very glad indeed that my old friend is prospering. If he should feel inclined to circle around among his old friends here in the States again, he will meet a most hearty welcome.

BEES AND BEE-HIVES.

WINTERING BEES IN EAST TENNESSEE.

I THINK you need to publish a Southern GLEANINGS, as about one-fifth of the present edition is filled up with reports and methods of wintering. Now, this no doubt is very interesting to our Northern friends, who find wintering a difficult matter; but with us it is only "filling," as wintering is never a difficult thing — that is, with those who are somewhat versed in the business. If the colony is in any thing like a healthy condition, the bees will winter in almost any condition.

Our friend J. A. Galbraith, of this place, told me a few weeks ago to bring a "sitting" of my improved Holy-Land bees, and transfer a hive for him. Well, I procured a fine queen, and went to "do the job." On arrival, I found they were in a "bee-gum"— a gum in reality, as it was a hollow gum-tree log, about 2½ ft. long, without any top, except a cracked board lying loose on top, and the top edge, or end of the log, had decayed so badly that one could stand twenty yards from it and see the whole top of the comb. Friend G. said it had been in this condition for several years, and yet I found a most powerful colony of bees in this old log. I have repeatedly wintered two-frame nuclei with success; and in my queen business I unite no colonies in the fall, but winter them on their summer stands, all of them being two, three, and four frame colonies; neither do I use any protection, except a piece of cotton quilt laid on top of the frames under the cover. However, I would like to say here that

THE WOOD FOR HIVES

has a great deal to do with successful wintering. We use poplar, and of this we have two kinds —

white and yellow, which get their names from the color of the wood. Poplar, you know, is the greatest wood known to swell and shrink, which is due to the open texture of the wood absorbing and expelling moisture; and while this is an objectionable feature on account of its being hard to keep the cracks stopped, it is also a decidedly favorable feature, as it takes up the moisture and keeps the cluster nice and dry. Especially is this the case with the yellow variety, it being more porous, but not so bad to shrink, as the white. I think the "coming and going" of the wood keeps the propolis inside the hive broken enough to allow the wood to receive the moisture.

TWO QUEENS IN A HIVE.

I was just on the eve of writing about a young fertilized queen laying nothing but drone eggs; but to-day upon opening the hive the first thing that caught my eye was two queens, one the above mentioned, and another young unfertile queen, one evidently feeding the other. The unfertile queen had faulty wings, which accounts for the drone eggs; and on further examination I found that the other queen had begun laying properly. I simply write this to illustrate how a great many things might be misrepresented. I might have written, stating that I had a young queen that had been fertilized, but laid nothing but drone eggs, as it really seemed to be the case. Chas. Kingsley.

Greeneville, Tenn., July 11, 1883.

PREPARING BEES FOR SHIPMENT.

FRIEND CARROLL'S WAY.

I PREPARE bees for shipment in metal-cornered frames, on metal rabbets, and I do it in 5 minutes. I take a thin strip 3 inches wide, and just the length of the inside of the hive *across the frames*. I nail this across the frames *in the center of the hive*, by using two ⅝-inch wire nails to each frame in the outer edge of the 3-inch strip, and two nails driven in the ends into the hive at an angle of about 30°. I now take common lath and saw four strips, and nail at each corner of the hive from top to bottom, raising the cover one inch or more. I tack a strip of wire cloth around the hive, where I raise the cover, and your bees will go safely any distance, and can be unpacked in 3 minutes. No sticks are needed at the bottom of frames. No turning up the hives to screw on the bottom. Of course, the entrance is also covered with wire cloth. B. F. Carroll.

Dresden, Texas, July 7, 1883.

Very likely your plan will answer, friend C., providing the bees bulged the combs pretty well, and made attachments from one comb to the other through most of their length; but unless they have, I should very much fear the frames would get swung around, or the bottoms get to swinging against each other. Two wire nails only three inches apart, or a little less, it seems to me could not very well fasten the frames very firmly, while our spacing-boards make them positively rigid throughout their whole length. You may be able to make a hive ready for shipment in five minutes by the plan you suggest; but I think it would take an average bee-man nearer half an hour, and I have had a pretty large experience in the matter. Another thing, I would not want to risk a very large colony during the hottest summer weather with the small surface of wire cloth you mention. Even where the whole top is covered with a sheet of wire cloth, when a strong colony gets on a stampede (if that is the right word), they will cover this wire cloth so densely with nothing but the heads of bees with their tongues out, that suffocation ensues. I know of no plan absolutely safe, except to have the whole top and the whole bottom of a Simplicity hive covered with wire cloth. Then we are all right, no matter how many bees are inside, nor how hot the weather is.

A QUESTION OF MUCH MOMENT TO MANY OF US.

WHAT SHALL WE DO WITH OUR BEES AFTER THE HONEY SEASON IS OVER?

THIS is a question of considerable importance, and not so easily answered either. The honey season is practically over with us here now, unless we should perchance get a little from buckwheat, which we have never done yet. They will bring in a very little for a week or so yet; then for a month they will not get as much as they consume; then in September and October they will fill up pretty full for a winter's supply.

If we can calculate from past experience, how to manage them for the best results is the query. They are at this time all strong; only about one-third of them have swarmed, and will well cover from 15 to 30 frames. Quite a portion of them are, of course, old and nearly worn-out bees; and if left just as they are until time for winter quarters, will not contain more than one-half as many as there are now, even if the queen did an average amount of her duty; and there is no use trying to set them to fetching in honey by smoking, for there is no honey to be found to fetch in.

If we divide and increase our stocks, and then from any cause our bees do not winter well, we shall be accused, "both at home and abroad," of "making haste too fast."

In previous years I have tried dividing after swarming-time, and mixing in empty frames, but have found it "no good," for there was not enough honey to permit them to build new comb in the empty frames. But this year I think it will be safe to divide moderately, and give empty combs and a laying queen at once, as I have a lot raised for that purpose, and have had about 80 lbs. of fdn. worked this summer.

I have had no second swarms, as I have learned a good way to prevent it. As soon as I can, after a swarm has issued, I just go to the parent stock and cut out every queen-cell, "every last one," and then let a laying queen, taken from a nucleus, crawl in at the entrance, and give her a parting salute with the smoker, and put a cell into the nucleus she came from; that is all. I haven't lost one yet, and no queenless parent hive for a week or ten days. A good way, isn't it? A. A. Fradenburg.

Port Washington, O., July 17, 1883.

Friend Fradenburg, my answer to your question would be, divide the bees, and feed. But I advise this with the understanding that they can be wintered and sold at a good profit in the spring. But I think it very likely that those who have bad luck in wintering will be very much safer if they do the feeding without dividing. Go into winter quarters with monstrous stocks crammed with stores of granulated sugar. As for ourselves, we sell bees by the pound almost every month in the year. Of course, we do not want to sell old bees, nor try to winter them, and therefore brood-rearing should be kept constantly going, until October at least. I know a great many are thinking about the matter you suggest, for bees are offered me at almost any price I see fit to give.

OUR GOOD FRIEND L. L. LANGSTROTH.

HE TALKS TO US ABOUT WORKING OUR HIVES FOR EXTRACTED HONEY, AND OTHER MATTERS.

I THANK you for your kind comments on my letter in the July No. Lest any of your readers should give me credit for suggesting, more than 31 years ago, the possibility of bees removing the spermatic filaments before they enter the egg, I will quote from my book:

> "In the summer of 1852 I examined a brood-comb which had been given to a queenless colony. It contained eleven sealed queens, and numbers of the cells were capped with a round covering, as though they contained drones. Being opened, some contained drone and others worker nymphs. The latter seemed of a little more sugar-loaf shape than the common workers, and their cocoons were of a coarser texture than usual. I had previously noticed the same kind of cells in hives raising artificial cells, but thought they all contained drones. It is a well-known fact, that bees often begin more queen-cells than they choose to finish. It seems to me probable, therefore, that, when rearing queens artificially, they frequently give a portion of the royal jelly to larvæ which, for some reason, they do not develop as full-grown queens, and that such larvæ become fertile workers."

While I still think that many fertile workers are thus raised, it seems almost certain that those reared in the normal way may, in the absence of a queen, become fertile.

You have such a multitude of matters constantly pressing upon your attention, that, if you say any thing about them, you can not, in some instances, help "going off at half cock." In the proposed changes in the upper story of your chaff hive, would it not be better to give them an actual trial before condemning them? Make the trial at my expense. Bear in mind that, having tried such an arrangement, I speak from experience; also that I have tried strong-storing colonies in their upper stories with great success. I now have chaff hives of this kind, in which the bees never became overheated.

UPPER ENTRANCES AND VENTILATION.

Let me explain how, years ago, my bees were kept so comfortable in the hottest weather, even without the shade of trees, that they rarely clustered outside. I made large use of hives of my regular pattern, having communicating holes in their bottoms, and piled one on top of another until three and sometimes four or more stories were used by a single strong colony. In hot weather, when the entrance-regulating blocks were all removed, very few bees left or returned, except by the lowest entrance, making use of those in the upper stories only as ventilators, for which nothing could serve better.

During the last fortnight the thermometer has often been above 90°, and even as high as 94°, and I have fully tested the sufficiency, with thin upper stories, of upward ventilation, in my double-story chaff hives. To let a good ventilating draft through hives which have no flight-holes in the upper story, I propped up their roofs as though they were hinged, the opening in the rear being some two or more inches high. Even in play-time, and with the drones in fullest flight, not enough bees came out from above to give any annoyance, and none clustered outside of the entrance proper. At the same time, colonies without what I shall call upward summer ventilation were distressed by the heat, clustering before their flight-holes, and wasting much precious time in laborious fanning.

WORKING HIVE FOR THE EXTRACTOR.

Friend Root, I hope at a future time to point out some of the many ruts into which the wheels of apiarian progress have so deeply sunk. Let it do for the present, to say that great changes are needed in many of our manipulations — more especially those used in extracting honey. My cardinal principle, not to require of bees or men the smallest unnecessary muscular effort, is specially important while extracting is carried on; for at this season the work in a large apiary is most exacting; therefore I condemn the directions usually given, always to keep the bees below the tops of the frames. While the extracting season lasts, I want nothing over the frames but the hive-roofs; to "work to the best advantage," I *must* get access to the frames the moment the roof is lifted. No time can be spared for tearing up propolized coverings of any kind, however important these may be in their proper season. A moment suffices for lifting off the roof; another, for a few puffs of smoke, and I am lifting out the frames to be set into a tight box, or on the ground around the hive. I often remove the frames from several hives before extracting, so that the bees on the first set of frames having had time to gorge themselves while the others are removed, are easily shaken or brushed off, the others being ready in due succession. When all are emptied they are quickly replaced, not a second being wasted in driving the bees down, and in replacing what keeps them down.

But I seem to hear some one cry out, "If the frames have nothing over them but the propped-up roofs, how can robbing be prevented?" By using Italian bees, or such varieties as, in a full flow of honey, can be tempted only by the grossest mismanagement to seek it anywhere except from the natural sources of supply.

I know that these bees came to us with the reputation of being extra bad as robbers; also that some of the ablest European bee-masters still affirm that this is their habit. But I found, very soon after trying them, that they were far less inclined than the blacks to rob during a full flow of honey, and so informed our American bee-keepers. This point is now so generally conceded among us, that there is no occasion to argue it.

"But," says another, "would you have the bees propolizing every thing above the frames within their reach?" Italian bees at least (I have never given the blacks a trial) do nothing of the kind. They seem to see at once that it would be far too large a contract. Try them, and you will find them gathering much less propolis than when, after each ripping-up of the coverings that confine them below, they strive the more to make them immovable.

"But, who would have them clustering under the roof, and comb-building wherever there is a vacant space?" Friends, they leave this clustering for comb-building above and away from the frames, to the blacks. "Yes; but do they not show less refinement of instinct than the blacks, when they attempt to build combs upward from the tops of their frames, so that, when sufficient space is given them, these combs soften and bend over, unless braced as in the photograph I send you, copied from combs taken from one of my colonies?"

Now, this disposition when proper storage room is not given to build on the tops of their frames, is a virtue, if we know how to use it aright. Tilting up the roof, as though it were hinged — for to *lift* it off before I know that I *must*, would be against the cardinal principle already laid down — a bare glance at the tops of the frames whitened by their new foundations, tells me that the extractor is needed, as plainly as though I had lifted out the frames to learn how heavy they are.

Now compare this easy and swift manipulation with the methods so frequently practiced by our leading bee-men — the lifting-off the roof, and carefully setting it down, and the bee-provoking practices which have already been described, only in many cases to find that extracting is not needed, and that more precious time must be wasted to replace things as they were!

If such useless manipulations are common among our best apiarians, with our style of hives and frames, what must be said of the foreign side-opening hives, in which bars are preferred to frames by Germany's greatest bee-master, and where, even when frames are used, little can be seen but the face of the first comb, and in the use of which the thin boards which cover both bars and frames must be pried loose before even a single comb is ready for removal; and when all this is done, both frames and slats running in propolized grooves must be pulled toward you by the pliers, forks, or hooks, described on pages 294, '5, '6, of Dzierzon's "Rational Bee-keeping." These methods truly seem to me like the preference of horses to locomotives for use on railroads.

If I stood alone in this opinion I might think it almost presumptuous to express it; but it is well known that Messrs. Wagner, Grimm, Dadant, and other great leaders among us have said the same thing. The former, who was wonderfully well posted up in the history of German apiculture, thought that the dearness of land in the old country seemed almost to necessitate the use of side-opening hives, piled one on top of another, notwithstanding the tedious and difficult manipulations which such hives necessarily compel, while the comparative rarity of circular saws, planers, etc., all moved by steam, and which may be found in our nearest settlements, reconciled Dzierzon to the slow work of splitting out the pieces which covered his bees!

If it shall be thought that Mr. Wagner and myself were very naturally prejudiced in favor of our own methods, surely there could be no reason why Adam Grimm and Charles Dadant, the one from Germany and the other from France, should condemn, as inferior, the hives which they had used in their mother countries.

What a digression! But I can not close it without paying, as I have often done before, my tribute of praise to the honored names of Dzierzon, Berlepsch, Kleine, and others, to whom in all that pertains to the habits and physiology of the honey-bee, we are under the deepest obligations. Who will hesitate to say, that the discovery, by Dzierzon, of parthenogenesis, is the greatest that has ever been made in apiarian matters, and was the "open sesame" to the mysteries which defied the subtle acumen of Aristotle, Swammerdam, Reaumur, and all who succeeded them?

L. L. LANGSTROTH.

Oxford, O., July 19, 1883.

Friend L., if you will excuse me, I think there is one important point you overlook, or pretty nearly overlook, all the way in your kind article, and that is, that bees will be greatly hindered in honey-storing if they have too much ventilation, or if the space where they are storing is too open or exposed. As it is some warmer in your locality than it is here, that may account partially for the fact that you notice it less than we do. Excuse me if I repeat somewhat what I have gone over before. In the hoop hive we found the bees averse to filling combs next to the hoops or open slats. Again, in our experiments in the house apiary, we found very much more honey stored in the sections that were blanketed or covered with cushions than in those left entirely without protection or covering. Especially was this the case when the bees were gathering honey in August and September. We tried the matter over and over again.

Only a day or two before your present article was received, I went through our apiary of about 300 colonies, making a careful investigation to see how the boys had prepared the hives in which was stored the basswood honey, which is now in full blast. Part of the hives had the frames closely covered with enamel sheets, strips of duck, or pieces of burlap, while quite a number had nothing over the upper frames at all. With weak colonies, many of them had nothing over the lower combs. Before I was one-fourth through I was satisfied the bees were storing much more honey where the mats were sealed down close, than where the combs had a partial covering, or no covering at all. The reason for it, I take to be this: That if the cover is complete and entire, but few bees, comparatively, are required to keep the requisite temperature to build the comb and ripen the honey; whereas, with exposed combs a large body of bees are obliged to stay at home to keep the requisite temperature for both these purposes. After that I took pains to have the space made tight and close, so not a bee could get above the combs, and it seemed to me a larger force went to the fields immediately. Now, I may be mistaken in my position here; and as this is a very important matter indeed, I would ask others to make experiments at once, and decide as far as we can what is best to do about it. I know combs can be worked nicely for the extractor with no covering during the honey season. I, too, have learned to tell at a glance at the top of the frames when it is necessary to extract.

While I think of it, I might mention that I tell by this very plan, when a colony has a laying queen. I have frequently gone out into the apiary and puzzled the boys a good deal by telling them that they would find laying queens in colonies where the slates indicated them to be queenless. In every case I was right; and the new eggs and brood would be found right under the white caps on the upper edges of the combs.

There is one more objection I would mention to leaving the frames without any covering. I never knew a bee-keeper yet, or at least I do not think of any now, who did not occasionally get careless, and then the whole top would be built full of comb. Perhaps you might say the honey would better be stored in that shape than to be lost, so I will not lay any great stress on this point. But another trouble, and a worse one, is, that these colonies will be left until the honey-yield is over, then the bees will go up on the cover to loaf, and great quantities of propolis will be daubed all over the cover and edge where it shuts down (for I presume, of course, you will not keep the covers propped open after the honey-yield is over), and then the cover will always stick fast, making it necessary to pry it up with a snap; for it is next to impossible to clean the propolis off so as to prevent this, after it once gets well coated. For these reasons I feel like saying I never want any bees above the tops of the frames, and certainly none where they can be mashed when the cover is shut down.

And now I hope, my dear friend L., you will not think I am taking a liberty in differing with one so much older and so much wiser than myself in all these matters. We have, I trust, both of us thrown out the facts and suggestions in our possession before this great class of A B C scholars, and doubtless they will soon give us abundant facts in the matter.

HOW FAR DO BEES FLY?

SOME INTERESTING AND VALUABLE FACTS IN THE MATTER.

I HAVE been much interested in the various articles, headed "Ninety Miles an Hour," published in GLEANINGS. One of your correspondents aptly says, "Arguing in regard to matters concerning which our knowledge is incomplete, is very apt to lead us into error." My knowledge is *very* incomplete on this subject; but having hunted bees considerably, and timed thousands of them, I should think they flew from 12 to 15 miles an hour when at ordinary work. It is very easy to mark and time bees when working at a box. Just take a little flour and water, make a thin paste, take a spear of grass, touch the end to the paste, step up to the box carefully, and touch the bee somewhere on the body. If your paste is just right, you have a mark that will last all day. When he starts toward home, note the time. When he returns, see how long he has been gone. If he comes in less than ten minutes, you ought to find the tree without moving. If he is gone ten minutes, his home is about half a mile away; 15 minutes, one mile; 24 or 25 minutes, two miles; 30 minutes, 2½ miles, which is, I think, the usual limit. The furthest I remember to have had any work was 3¼ miles, and they were gone from 33 to 36 minutes on as fine a day in July as you ever saw.

This rule is not invariable, nor do I know of any that is, where bees are concerned. Some claim a great deal of the time is spent in unloading; but when your box is near the tree, a bee will go, unload, and return in 4½ minutes; and occasionally, *but very seldom*, in 3½. Some claim that bees go seven miles to gather stores; but judging from my experience, that is one of the imaginary facts. Because you see bees seven or fifteen miles from houses or trees, proves nothing about the distance they came. I once found a swarm in a woodchuck hole, within 40 rods of hollow trees.

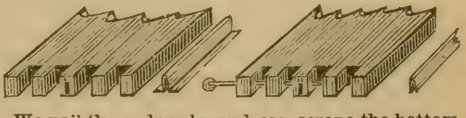
East Freetown, Mass. C. E. CHACE.

DEVICE FOR PREVENTING BOTTOM-BARS FROM SAGGING.

SOME SUGGESTIONS FROM FRIEND BLOOD.

WHILE we want bottom-bars that can not sag or bend down in the middle, we also want something that is light, and occupies but little room. The bottom-bar to a frame one inch in thickness would be altogether too heavy and too bulky; and I believe most bee-men would consider that one a half-inch in thickness would be more than could be tolerated. The bottom-bars to our frames are about 9-32 inch in thickness, and this answers very well, providing it is supported in the middle by the usual diagonal wire. This diagonal wire, as you all know, is out of the question in a wide frame to hold sections. Diagonals have been suggested, to be attached to the separators, but this supports only one edge, and gives the sections a tendency to fall out of the frames. We have but little trouble about the sagging of bottom-bars to wide frames, by making them of basswood (which we find stiffer than pine), but friend Blood proposes to stiffen them with folded tins. We will let him tell it.

For some time I have been expecting that you would do something to prevent the sagging of the bottom-bar of the wide frames for honey-boxes. We have been troubled with the sagging of the bottom-bar in some cases to such an extent as to press the boxes very much out of square. Our remedy is as follows: run the frame over a thin saw, allowing it to cut nearly through the bottom-bar; then press into the saw-kerf a strip of tin folded in this manner:



We nail the ends only, and can scrape the bottom-bar without trouble, if we want to; try it; and if you like boxes kept true and square, you will use it, if it does not suggest something better.

Quincy, Mass. A. H. K. BLOOD.

A BEGINNER'S TROUBLES.

A VERY SAD (?) TROUBLE INDEED.

AS I am a novice in bee-keeping, I am constantly meeting with difficulties. Here is one: Some time ago I had an exceedingly large swarm. In fact, it almost filled my hive, and in a few days it filled it with honey. Then great numbers of bees clustered on the outside of the hive in front, and on the shady side; so I nailed together a rough box, and capped it. In four days of cloudy weather this box was filled with comb. In a few days that were sunny it was filled with honey. I then removed the box and brushed the bees from the honey in front of the hive. These, together with those that had clustered on the outside, made about half a bushel of bees that could not get into the hive. A heavy rain was coming up, and I feared that my "blessed bees" would be drowned. So I ran and got another hive and set it square upon this one. In a short time the bees were all safely housed. Now they have filled this upper hive from bottom to top with combs, and partly filled them with honey. Here is the difficulty: If I wait until this honey is capped, and then remove the upper hive, what will become of my bees, for they can not get into the lower hive? Thousands of young bees are hatching below.

Would it not be best to remove the upper hive immediately, or divide the bees in the upper from those in the lower by placing a board between them, and give the upper the means of making themselves a queen? A word of advice would be gratefully received. JACOB TATE.

Gilead, Ind., July 18, 1883.

Well, I declare, friend Jacob, you are in trouble, *aren't* you? I do not know that I ever before had a *complaint* just like yours. It is really too bad if they all bring in so much honey that you can not find boxes, frames, or any thing else, to hold it. Fill your hives with sections on the most approved plan, and then take each section out as fast as it is capped. Or if you want to get extracted honey, get an extractor and take it out of their way, even if they *do* fill every thing again in three days or less. If you want increase of stocks, just take out the frames as fast as they are filled and capped over, and put in wired frames filled with fdn. In fact, I do not know any nicer way to take care of surplus honey than this latter. Do not, in any circumstances, let your bees loaf on the outside of the hives. Supposing that thousands of young bees *are* hatched out every day below, is it not that exactly which you want? You can divide the colony if you choose; but so long as they don't swarm, but just keep raising bees and honey — why! just let them keep on. Boys, what do you think of friend Jacob's predicament? Don't you think he is really to be pitied? Hadn't some of us better move into his neighborhood and help him a little, especially if he has found a place where honey comes in like that every season?

SEEING THE WORLD.

SOME PRACTICAL HINTS FROM FRIEND HARRIS; ALSO WHAT HE SAW WHEN HE WENT VISITING.

I WROTE you about a month ago about my lunatic bees; and as I think, or, rather, *thought*, I had found a remedy for their lunacy, and I have seen some of the world since then, I will trouble you again, but hope I will do no harm thereby. How did I cure them? Why, simply by giving them plenty of ventilation from the bottom. My hives are made close, with bottom-board nailed tight, with no air-vent except the entrance, which is ⅜x4 inches.

Well, those bees kept up that idiotic dance for several days after I wrote, even when honey was coming in; and as I had effectually cured some of lying out by downward ventilation, I thought I would experiment on the lunatics the same way; so, after preparing some empty hives I transferred them, and I have seen none of their scraping since. But for a few days I have noticed the bees of another colony, whose hive was ventilated some time ago, have been at the same trick. So it seems that what cures one does not prevent another.

You say, in your foot-notes to my communication, "I suspect we get more honey in the North, because of the men, the locality, and the influence of the climate on the men" (p. 375). Well, you may have smarter men, and you may have a better locality for honey; but what "the influence of the climate on the men" can have to do with bees gathering honey, seems to me a little funny. I said I had seen some of the world, and so I have. On last Friday I went by rail *away* over to Rockmast, *fourteen miles* from here, thence with a friend in his buggy, as per previous arrangement, five or six miles, to friend J. S. Davitte's. My buggy friend, Mr. Hoge, who is a relative by marriage, is no bee-man, though always read to accommodate a friend to a buggy-ride. We found friend D. at home, and expecting us. He is a well-to-do farmer, and keeps — well, I don't know how many colonies of bees, and he said he didn't know either. But he said, "When you write to friend Root again, you may tell him that there is one man who runs a house apiary successfully." His house has just 50 hives, but not all occupied. Friend D. has a good locality, but does not give his bees the attention necessary to make them very profitable. He has two large farms, three or four miles apart, which require a good deal of his time.

Friend Davitte cuts no aristocratic didos, but is quite social. This is enough for me to say of a bee-man; you can imagine the rest, as to our entertainment. After spending about five hours with him at his home, he took a seat with us in the buggy, and went with us to his *other* plantation, and to his brother's *other* plantation, where I saw his extractor, which is the only one I ever saw, except the one I made myself, which was a success, though more trouble to manipulate.

I have a friend here who has a vineyard. He is a temperance advocate, and does not want to make wine, but wants to know how to save his grapes in a dry state. Can you, or any of your correspondents, tell him how? How are raisins made? I did not tell how I ventilated my hives. Bore four or five one-inch holes, and cover with wire cloth.

J. M. HARRIS.

Cedartown, Polk Co., Ga., July 19, 1883.

Friend H., I do not believe you are right about the lunatic bees. Giving them more ventilation might start them out to work, and I suppose that would get them off from their queer notion of scraping their hives.—What I said about the climate, etc., was intended to suggest that men get lazy by going to Florida, even if they *are* naturally energetic. I really hope I am wrong about it.—I congratulate you on having seen so much of the world in just one day. And I am glad, too, to get a report of the house apiary; but how long has our friend been using it?—I can not tell about the raisins, but I suppose some of our California correspondents can. I know some beautiful raisins have been sent us from California.—I really hope your temperance friend will find some way to make his vineyard profitable without dealing with any thing that can in any way intoxicate.

COMBINED CASE AND CRATE.

ALSO SOME OTHER MATTERS.

IN reply to Byron Walker, page 368, I will say that I will, of course, never refuse the task of trying all new things sent me by friends, gratis. I have not, however, forgotten the Deane case, which no sooner breathed than it died. Though illustrated and praised by its inventor, and by Prof. Cook, where is it? A sample was sent to me. I think of no words fitting with which to express my dread of such complication. I like friend W., and his honest zeal; but my honey-dealers have made me believe that they could never get my price on comb honey sent to market with the glue on the sections. I still believe that we shall gain by giving all our sections a cleaning before sending to market. I think the glue "combined" looks too antiquated on our markets of to-day. Friend Walker's comparison on the Given press is not appropriate. Had he tried wires imbedded in the septum of foundation in as perfect a style as any machine could put it there, and then could not make it work, well might he exclaim against the press, though he had never seen one. Now, I have seen gluey sections rejected, and we know the combined case and crate does not prevent gluing. I think it a mistake for any one to think that either of us write the praises of our preferred sections because we sell them. Friend Walker has no patent on his, and I have not one cent, even, invested in the manufacture of mine. I buy them to sell again. It would be no loss to me to find out that the one-piece section was best, for I can buy that cheaper. Let us not be so uncharitable as to shut our eyes to reason, which says, we use and sell our style of goods because we like them best; not, "like them best" because we use and sell them.

Now, Mr. Editor, I was never more shocked than to read your comment on my article in the last number; most, at your closing sentence, where you, after your prejudicial remarks, infer that your columns are closed against any explanatory defense; also shocked at your lack of knowledge pertaining to the quotation I made, or terrible one-sidedness in giving all great men their due. My quotation was not from the book that you revere, the Bible. Such words are not there; and though the same sentiment was put forth in other words by the loving and sacrificing Christ, that does not detract any from the merits of the great and noble Confucius, who exclaimed them 500 years B. C. I consider it very wrong for men to idolize one great reformer, to the utter ignoring of another. If you really thought this well-earned compliment to the heroic dead was going to hurt any one's feelings, why did you not draw the editorial pen across the part that was of no special importance to the subject, and which would not change the sense of the matter, rather than hurt my feelings as you have?

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In regard to your list of names, if you furnish them at 50 cents per 1000, you virtually give them away, and I have not one word to say regarding any exclusiveness in the matter on your part.

JAMES HEDDON.

Dowagiac, Mich., July 4, 1883.

Friend Heddon, it was the words "glad tidings of great joy" that I objected to, and not the golden rule. I did not cross it out of your letter, because I did not feel sure that you would want me to publish your article with a part omitted. Since you have been so kind as to give me this liberty, I will take you at your word, and cross out a little over a page of your present article, which I think much better left out. Now to come right down to the point, decidedly but kindly, I can not think it my duty to let any thing go into print, taking the ground that Jesus Christ the Son of God was a "great reformer." I know there are those who claim to have a different opinion in the matter; but as for myself and the journal which God has seen fit to put into my hands to guide and direct, God helping me, all men shall know that *I* am on the side of Christianity and the Bible. Any words or writing that would seem to encourage the idea of putting Christ on a level with Confucius, or any other human being, I shall consider out of place in GLEANINGS.—I am very much obliged to you for your kind words in regard to our printed list of customers. We certainly agree on that point.

DRONE FOUNDATION FOR SECTIONS.

SOME PRETTY HEAVY EVIDENCE AGAINST ITS USE.

SINCE W. D. Higdon, in June GLEANINGS, has written so emphatically in favor of drone fdn. for sections, I think it is time for a little evidence on the other side of the question.

In August, 1881, I sent to you for 5 lbs. of thin fdn., without specifying which kind I wanted, as in your price list you say that worker will be sent unless drone is ordered. You sent drone fdn., however; I presume because you were out of worker. Now, I did not want drone fdn.; but as I needed foundation at once, I concluded to give it a fair trial, so put it all on the hives.

There was little fall honey, however, and but a small part of it was worked out. In the spring, these sections were put back on the hives, thoroughly mixed with sections containing fresh worker fdn., and starters of natural comb — about one-third of each kind in most hives. Now for results:

The worker fdn. was drawn out and finished *first*; the natural comb next, while the bees seemed very averse to working the drone fdn., drawing much of it out but a short distance, and then contracting the mouths of the cells with heavy rims of wax, as though they wanted to make worker comb out of it. At the close of the white-clover season, a large part of the sections containing drone fdn. remained unfilled.

In the fall we had such a yield of honey that I was unable to take it away as fast as the bees gathered it, being also short of sections, fdn., and other supplies, and nearly every swarm had the spaces between upper and lower frames, and between the ends of frames and sides of hives, filled with honey. Out of over 4000 sections on the hives, less than 300 remained unfinished at the close of the season. Among these unfinished sections were many containing drone fdn. still unworked; and in preparing for this season's work I cut out a great deal of this fdn., which had been in the hives during the whole of an excellent honey season, and which the bees had done nothing more than to propolize a little.

It may that the reason the bees did not work it better was, that it was old and hard; in fact, I think that had much to do with it; but I have little inclination to experiment further with drone fdn. — at least, not on so extensive a scale, as I think that the use of that 5 lbs. of drone fdn. cost me several hundred pounds of honey. J. A. GREEN, 140.

Dayton, Ill., June 21, 1883.

Many thanks, friend G., for the important facts you furnish. This is indeed a matter that demands careful investigation. I have been a little surprised to hear so few reports in regard to the matter, especially while we have so many orders for drone as well as worker. I had thought it quite likely that during a moderate flow of honey, the bees would give a preference to the worker fdn., and I am a little surprised to hear that they did not use drone, or at least give it the same preference during a heavy yield of honey, such as you report having had. Your point, also, that old fdn. is not as good as new, is an important one. I have before suggested that it is probably owing to the fact that wax, when exposed to the air, loses an oily portion of its substance, making it harder to work. It is for this reason that bleached wax has been quite unsuitable for fdn. Will those who have experimented with both kinds of fdn. for surplus honey please report in regard to the drone? Has your experience been like friend Green's?

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FOUL BROOD.

SOME FACTS FROM A SUFFERER.

THE winter of 1880 was the hardest ever known in this section for bees. Fully 95 per cent of all the bees left out unprotected died, while the loss was about 20 or 25 per cent of those packed in chaff, buried in clamps, or wintered in cellars. I had 3 stands buried, which came through alive — one good colony, and two weak. Lost one by spring dwindling; bought 3 more, 2 of which died, leaving me three stands. Friend S., whose bees had all died, gave me his combs, which I wired into frames; and when the bees swarmed, I put the new swarms into hives filled with empty combs, which enabled me to increase my stock to 8 colonies, and I got about 200 lbs. comb honey. My 8 colonies were all strong, and in fine condition, and came through the winter all right. The spring of 1882 proved cold and wet until July 5, when a drought set in, which lasted 7 weeks, and every thing got so dry that very little honey was secreted. Basswood, which usually blossoms here about the first of July, did not blossom till the 26th, and then lasted only about a week. Last year's honey-crop was small, most bee-keepers reporting only about 20 lbs. surplus to the original colony.

About the first of June I noticed one of my colonies dwindling, and went to my strongest colonies and took frames of hatching brood, and exchanged them for frames from this weak colony. They still continued weak, and I got an experienced bee-keeper to examine them, and he pronounced it foul brood. The cappings were shrunk, and turned brown and black; and on picking them open they were found filled with a foul, offensive matter.

We examined the frames that I had taken from this hive, and put into 3 other colonies, when I exchanged and found them filled with foul brood in various stages of advancement. June 24, at night, after bees had ceased flying, I took the weak hive from its stand and put an empty box in its place, and brushed the bees off in front of it, and let them crawl in. I burned frames and combs, and burned out inside of hive; kept them three days, and then put them in the hive on foundation. They built up to a fine colony by fall, and are apparently sound. The other 3 affected colonies which were full of bees, I left to swarm. One did send out one a few days after, which I hived on fdn., and they appear healthy. The other two would come out almost every day in great numbers, and buzz around and make a great ado, but failed to swarm. Those two matured no queen-cells. As queen-cells are a temporary structure, and are not made of an original secretion, but are composed of "odds and ends" picked up through the hive, may not this account for the fact that hives having foul brood so rarely swarm? In a few weeks they began running down, and I noticed, in front of them, black scales something like those we see from a blacksmith's anvil. Closer examination showed it to be composed of cappings and contents of those deseased cells, the putrid matter having dried down to a hard black sediment, which the bees threw out in front. Seeing that those hives were doomed, and liable to spread the contagion, I applied sulphur, Aug. 21, and extracted the honey, and rendered the combs into wax. The parts filled with rotten brood I burned. It was a sickening job; and were I to have it to do over again, I would burn bees, honey-combs and all. The bees would some of them revive; and as they would be liable to carry the disease to other hives, if they went back, I had to kill hundreds of the poor fellows by crushing, and then scald the floor of the room in which we operated. On reflection, I will say that, if foul brood is found in the fore part of the season, it may possibly pay to save the bees (and bees only, burning the rest); but if later in the season, destroy the whole; it won't pay to fuss with it.

Now the question arises how I, a beginner, got foul brood. Did it generate spontaneously, or was it introduced from without? By close inquiry I found that none of the parties of whom I got bees or combs had known of any foul brood among their bees. But a neighbor of Mr. S., whose bees were only about 100 rods distant, lost several colonies by foul brood in the summer of 1880; and as Mr. S. lost all his bees the following year, he doubtless had foul brood among his bees, but was not conscious of it. As for the remedies for foul brood, I have had no experience, and am faithless of their efficacy. A correspondent of GLEANINGS tells us that we can destroy foul brood by spraying the combs and bees with a solution of salicylic acid and borax, or alcohol. Surely that remedy is very simple; any clodhopper ought to succeed with those simple directions. The theory is fine; but how do we find it in actual practice?. On opening a hive containing foul brood, we find empty cells from which the larvæ have repeatedly perished; others capped, which are filled with corruption from the larvæ that died; and again, other cells filled with honey or propolis, sealed and unsealed, which had formerly been occupied by the diseased brood. Now, if salicylic acid can penetrate through all that wax, honey, propolis, corruption, or dried sediment, to the bottom of those cells, and destroy those spores, then it surely possesses antiseptic properties beyond any thing I have seen or heard. Possibly the writer designed that the cappings should be shaved off, and the combs emptied by the extractor before applying the remedy, even then; and admitting the disinfecting properties of this acid, I think the cure doubtful. Would not the putting-on of new fdn. be the safer plan? DR. J. E. FERRY.

Fabius, Onon. Co., N. Y., Feb. 13, 1883.

Thanks, friend F., for your practical facts in the matter. Now, I really do not see why you should take such a discouraged view of the matter when you have succeeded in securing three colonies by what would seem to me to be a comparatively easy process. If driving out the bees, and hiving them on fdn. will do the work, we can surely manage it. Very likely the best thing to do with the old combs will be to melt them up into wax. And a great many of the old combs in common use could be melted up profitably in the same way, even if there were no foul brood about it. The loss then would be the brood contained in these combs. Now, if this is a great part of it dead, the loss is but trifling; and I am not sure but that a great many old hives would well repay for melting up the old combs and setting the bees at work on nice new frames of fdn. It seems to me that even if I did use salicylic acid, I would start the healthy bees working on new fdn. in new hives.

HIVING A SWARM FIVE TIMES.

LETTER FROM AN A B C SCHOLAR.

WELL, Uncle Amos, here is one of your A B C scholars writing out of doors on a bee-gum, all alone. Now, I want to tell you that I have just hived the crossest lot of bees I ever handled, and that is not all; this is the *fifth time* they swarmed out. The first time, I hived them all nice and snug; in about half an hour they scampered out and went home. The next day they came out and clustered in the same place, and I took them in my swarming-box, all nice. I shook them gently on the table, and they immediately took wing and "scud" for home. In two days after, they swarmed in the morning, aired themselves for a long time, and then went back; did the same in the afternoon. To-day, the 14th, at one o'clock they came out again, and I had a hard time to save them. They were about 30 minutes in the air before they came down, I throwing water all the time. About a pint cupful came and went into the gum that I had ready; yes, went right in, and the sheet was covered, and bees all swarming around my head, and were just in the act of settling down, when there came a heavy puff of wind and blew them back, and then they arose and settled a few feet above the gum. I am confident they would have gone in if it had been still. I tell you, I felt vexed when I found they were so very cross. Now, if any A B C boy can beat that, let him stand up.

ECONOMY IN HIVES.

There are only 3 swarms out of 20 stands wintered, and in good shape. Yesterday I had a chat with our old-fogy bee-keeper, who wintered 40 stands in common box gums, all painted nicely, with a hole on top for boxes, that cost him 25 cts. apiece to make. His bees are booming — from one to five swarms a day, when the sun shines. He has lots of honey, and the best luck of any one in the neighborhood, while I, with my "*patten fixens*," am not getting any swarms nor any more honey, nor wintering any better; and look at the difference in the cost of gums: his, 25 c.; mine, $2.50 to $3.00 per gum. Are not you bee-gum makers putting it a little strong on "patten fixens,"? Of course, Uncle Amos, I believe in progression; but if a cheap thing will do just as well, why go to heavy expense? Let economy be the watchword.

HIVING BEES WHERE THEY CLUSTER.

Old Fogy says he hives his bees and lets them stand as near where they cluster as possible. He claims they do much better. What do you think about that? I hope to hear from some of the brethren on this point. J. W. C. GRAY.

Atwood, Ill., June 14, 1883.

Friend G., I watched anxiously through all your narration, to see if you did not finally try putting a frame of brood in your hive. But I think you say nothing about it at all. Now, under such circumstances I have found a frame of unsealed brood so sure that it seems almost impossible the bees could have deserted it. Surely you have heard it recommended over and over again, have you not?—You say your neighbor with the old box hives has hived from one to five swarms a day. If one's object were to get swarms and nothing more, perhaps a 25-cent bee-hive would do very well. But how about getting your crop of honey, raising your queens, improving your stock, etc.? If you could see how badly we are crowded with orders in trying to supply the friends with what you term "patten fixens," perhaps you would not think we were "putting it down too strong." By all means, let economy be the watchword. But do not let it be a foolish or thoughtless economy. — In regard to letting bees stand where they are hived, I am not sure it makes any particular difference, although you will see that friend Peters, in the A B C book, gives some very sensible suggestions in regard to the importance of moving them to a different locality as soon as hived.

BEES AND SUNDAY.

SHALL A BEE-KEEPER STAY HOME FROM CHURCH DURING SWARMING-TIME?

I HAVE a question to ask, or, rather, I want your opinion on it. My wife is very conscientious about keeping the Sabbath holy, and doing no work on that day; and last Sunday she reprimanded me for swarming my bees. Now, you and I both believe in keeping that day strictly, and my wife says I have no right to keep any thing that will keep me from the house of God, or that requires labor on that day. I referred her to the ox that fell into the ditch, etc.; but she sticks to it, that if I work with my bees we shall not prosper spiritually. As you and I keep bees, and they are not particular about keeping the Sabbath, but swarm at any time, is it right to stay at home on the Sabbath to swarm our bees, or have our hired help do so in swarming-time?

Watseka, Ill., June 25, 1883. W. H. SHEDD.

Friend S., you are striking on an old question; and if you will excuse the liberty I take, I will suggest that disagreeing with your wife may be a worse sin than staying at home and working with the bees on Sunday. While suggesting a reproof, I take into consideration that we are, very many of us, liable to this very weakness. I should infer from your statement, that your wife is taking one side of the question, and you the other, and I fell to wondering if in your zeal to carry your point, you did not forget the real spirit of the Master, who told us that "the Sabbath was made for man, and not man for the Sabbath." If you are really forgetting your religion in your zeal for bee culture, of course your wife should remonstrate; but the remonstrance should be in the spirit of great love and kindness, should it not? And you on your part, if you think differently, should present your views with this same spirit. Candidly, I do not know whether one ought to stay at home from church or not to look after his bees. Doolittle, who has written pretty fully on this subject, seems rather to think he should; and if I raised comb honey as he does, it is possible I might do the same. And yet for all that, I am afraid my conscience would trouble me sorely, if passers-by on their way to church saw me, Sunday after Sunday, with my coat off, flying around among the bee-hives. I think I should try very hard to go to church. I believe that the way I should try would be to ask God, on bended knee, to help me to plan some way by which my influence might be thrown strongly and constantly on the side of Christianity.

OBITUARY.

We take the following from July No. of the *Exchange*, and we hope our friends will not fail to gather the moral contained in the sad notice.

> Died at Denver, Colo., June 16, of hasty consumption, Theodore Houck, of Canajoharie, N. Y., aged 26 years and 3 months.
>
> We are reminded, in the death of Mr. H., of the frailty of this life. Up to the first of last January, Mr. H. was a perfectly healthy man, having passed an examination just prior to that for a life insurance. On the 2d of January he attended the meeting of the Eastern N. Y. Bee-Keepers' Convention, held at Albany. He put up at a hotel that night, and was assigned a room and bed that had not been used for some time. The consequence was, he took a severe cold, which settled on his lungs, and hurried him to the grave with quick consumption.
>
> Mr. Houck was a thorough bee-man, beginning when a boy, and continuing until health gave out and death came. He loved the bees, and was never happier than when among them. His public career was short. About 18 months ago he purchased the *Bee-Keepers' Exchange* from Mr. J. H. Nellis, and conducted it up to within a very few weeks of his death, his failing health compelling him to place it in other hands. He leaves a widow, bowed down with grief, having in one short year buried her husband and little boy, their only child.
>
> We extend our heartfelt sympathies to her in this hour of affliction, and pray that He who doth not let a sparrow fall to the ground without his notice will comfort and sustain her, and give to her that grace which will enable her to say, "Thy will be done."

Thus you see, friends, a valuable life was lost by a little carelessness in regard to a sleeping-room. Carelessness and heedlessness are bad enough; but when it comes to result in the death of a fellow-being, it seems awful to think of. As many valuable lives have been lost in this way, we trust that the importance of this matter of bedrooms and bedding may receive the attention it demands. Poor friend Houck, full of business, and full of zeal and work, as we are all of us now at this time, was obliged to lay down his life, and bid adieu to his friends, almost without warning. We echo the concluding sentiment, "May He who watches lovingly over all, comfort that bereaved wife!"

OUR OWN APIARY.

ITS CONDITION THIS 6TH OF JULY, 1883.

> It seems that GLEANINGS has lost one of its most interesting features — to us at least, for we often used to meet with an article with the heading, "Our Own Apiary," right from your honorable self, which was of great interest to us, and, we presume, to all your readers living outside of your limits. So, please take the hint, and do so again.
>
> S. D. HASKIN and others.
>
> Chandler's Valley, Pa., July 3, 1883.

Well, friend H., I shall be exceedingly happy to accommodate you, but very likely you and some "others" may be a little disappointed. Perhaps not at the amount of the business done in our apiary, but at the condition in which you would find it, if you were to visit us just now. For some days past I have been wondering if some of the friends would not feel a little disappointed on making us a visit, after what I have taught in the A B C book about system and order. I presume you all know what I told you in our June JUVENILE. Well, our constant aim has been to deal justly with our patrons, rather than to take valuable time and skill in putting things to rights, as we should do if it were not for the great rush of business. Our apiary to-day comprises about 200 colonies. The bees in the 200 hives, however, ought to be in 400, according to my notion. Were you to take a peep into the hives, you would very likely find quite a number building combs back of the division-boards. In some places you would find odd-sized frames of combs, sent us by those who have sold us bees, standing in divers shapes in the chaff hives, waiting to be transferred, and some of them have been waiting so long that they are now bulged and heavy with clover honey. Only yesterday our apiarist lifted out four such combs, and stood them against a chaff hive, and then began to consider where he should put them. But before he got a place for them, the sun swung around, and one of them tumbled down in the grass, in a heap, a nasty, squashy mess. The poor daubed and draggled bees buzzed into a hive not their own, at the risk of stinging the queen. I wonder how many of you know what an intolerable nuisance it is to have hives in the apiary, containing odd-sized combs.

Even though our apiary does not present a very tidy appearance, the hives are full of bees and full of clover honey. On last Monday we filled an order for 50 two-frame nuclei, and it did not seem to thin off our bees, or queens either. One of the boys is just now at work pulling out the grass and weeds around the hives and fixing a nice foothold for the bees around the entrance, by packing down a little shovelful of sand made by pounding up white sandstone; a couple of little girls are engaged in tying up the grapevines, and clipping off the shoots that push out in the way. A young lady who is learning bee culture goes through the hives, and takes out the queen-cages where queens have been introduced. After that she marks the slates as fast as she finds the queens laying, and then gathers up the cages in a basket. We have plenty of bees, plenty of queens, and plenty of every thing to fill orders as fast as they come,—only lacking plenty of skilled, competent help. What a great thing in this world *is* skilled and intelligent help! Did you ever think of it?

Bees are going out of the apiary every day, and are also coming in every day. One morning a farmer's boy brought us some swarms of bees before five o'clock, and so they come stringing along almost every hour of the day. Frequently some of our friends in the country bring us a load before dark, and we have to fix the hives and combs, and dump them in, weigh their boxes, give them their money, and off they go. We pay $1.00 per lb. for Italians, and frequently the same bees are sold the next day for $2.00 per lb. Don't you think this is a money-making business? There is one little drawback to it. A new swarm of bees is heavy with honey, while those we shake off from the combs and send off are frequently just the other way. As a proof of this, a new swarm heavy with honey when put on to empty combs just at night will often have a pound or two of honey in the combs before they start out to fly in the morning. You see, this kind of traffic — loads of bees coming into the hives, and going out daily to fill orders — rather breaks our apiary up, so there is no order, system, or individuality about it. By the way, I might mention that most of the bees now brought in are beautiful Italians. Italian blood has become so thoroughly disseminated in Medina County, that the blacks are becoming almost crowded out.

If you want to see a scene of din and bustle and stir and hurrah, pay a visit some time in July to "Our Own Apiary."

BEE-NOTES FROM THE SOUTH.

TWO QUEENS IN ONE HIVE.

THIS has occurred with me on several occasions. I have closely watched them, and my opinion is that there is *always* some good reason for the phenomenon, for such it really is.

Upon one occasion I could see no reason whatever for the bees desiring the additional queen; but as she was laying, and looked quite lively and fine, I concluded to put her (the old queen) in a nucleus hive, leaving the young queen in charge of the colony. I did so, and the old queen went on laying as nicely as could be desired; but, lo! when the bees *hatched out* they were diminutive drones, all of them, and *reared* in worker comb.

This was two years ago; and 4 weeks ago the some thing occurred, and I now discover the queen lays nothing but drone eggs, and only a few of them. To sum up, I am quite positive that, whenever we find an old and young queen, or two queens in one hive, something is wrong with the older one. The bees seem to possess this knowledge, or instinct, and rationally make preparation to supply the defect in the old queen by rearing a new one. Query: Would it not look reasonable to suppose that they might put this off too long, until no eggs for queen-rearing remained, of the right kind? It certainly does to me; but I suppose in that case, the discovery being made that them other was laying drone eggs only, in worker-cells, would be the evidence sought by the colony that she was getting to be of no further use as a queen; in that event, they could, if necessary, I presume, immediately resort to the larvæ on hand, for a new queen.

The new queens *look* well, and do as good work as those raised by best methods; and, taken all in all, I don't see but it is a right good thing, though of course much valuable time is lost.

STORING DURING A HEAVY HONEY-YIELD.

We are at this moment in the midst of a heavy honey-yield, and I am running my bees for extracted honey only, although having no extractor, having sold mine a year or so ago. On some of my colonies I have *six* Simplicity hives at this moment, and all of three top ones are *full* of honey. Strange to say, that only the top or upper story is sealed over. Upon the front of every other hive I have an inch auger-hole bored, through which the bees can pass.

EXTRA ENTRANCES.

I think, in using as many as six hives tiered up, some other entrances besides lower ones are badly needed; this is my reason for having the auger-holes bored. As a rule, I wouldn't bore holes in my hives. In my six-story hives there are four entrances, and they pass in and out in a stream at each. Oh, it's delightful to watch them hurrying in and out of these monstrous big hives!

If I had an extractor *now*, I would extract largely; but I shall defer it until fall. I was fortunate enough to buy a couple of hundred L. frames filled with empty comb, and these are going to be "stacked up" over the strong colonies till filled, and shall stay till I get ready to extract. I expect to make a report of an extra large yield to the colony, this fall. I was so sorry to hear, through friend Doolittle's last article, of the death of the "invulnerable bee man"! I am firmly convinced that this "style of man" is *scarce*, though of course I do not doubt every word that Mr. Doolittle says; and I believe if his bee-man's equal can be found in the United States, I for one shall start on an excursion to see him at the earliest possible moment, bringing with me a colony of Cyprians to try him on. R. C. TAYLOR.

Wilmington, N. C., June 6, 1883.

Friend T., your fact in regard to the hives storied up six stories high is quite an important one. I, too, have thought of the extra entrances, and have tried them to some extent; but I rather caught the idea that these entrances induced the bees to neglect the combs below them; that is, if we put an entrance in the second story, the bees seem a little loth to use the lower story, unless they were obliged to. Friend Doolittle, or some one else, suggests that the bees which bring in the honey never carry it into the upper stories or boxes, but that they deposit it in the cells quite near the entrances, and that the wax-workers, or bees that can not fly, carry it up where wanted. Even if this be the case, I presume some labor is lost, unless it is a fact that these "youngsters" would do nothing else if they did not carry honey upstairs. Who can tell us more about this matter? I like the tiering-up plan because you do not need to extract your honey until you have time to do it. Another thing: The honey that has been stored in June, and stands in the hive covered with bees until August, has an extra flavor and consistency, as you may have found out. Simplicity hives seem to be remarkably handy for this kind of tiering-up, when one is so crowded that he could not secure his crop of honey in any other way. I do not believe that I quite agree with you, friend T., that where an extra young queen is raised, the old queen is necessarily failing. I once thought so; but since then we have had several queens that did good service for a whole season, after being found with a good-looking daughter, helping in the business of egg-laying. If I am correct, several similar cases have been reported. You know we have had some talk of getting our extra queens by this method; and some one said that a good queen that would constantly get her workers to raise others while she was present was worth $25.00.

FROM DOOLITTLE, AGAIN.

RAILWAY TRAINS RUNNING SIXTY MILES AN HOUR.

On page 376 friend Root asks, "Have we an experienced railroad friend among our number who has seen this thing tested by actual, careful test?" Although not a railroad man, I can tell what I know regarding the matter. Friend Root will remember that I visited him in the fall of 1876. On my return home I arrived in Rochester, N. Y., in time to take the special New York express train, which is made up at that place. As we commenced to move out of Rochester, I looked at my watch to see the time, for I had often heard of that being the fastest train on the N. Y. C. & H. R. R. R. There is at this time a train called the "limited express" which runs still faster, so I am told. It is 81 miles from Rochester to Syracuse, and the special New York express makes but one stop between the two cities. My observation showed we were an hour and 28 minutes going from Rochester to Syracuse, including the stop, which gives about 55 miles an hour as the average time; and if we take out the time lost by the stop, it would not be far from 60 miles an hour for the whole distance. The distance between the mile-posts was made several times in from 52 to 55 seconds, and many more at from 55 to 57 seconds. The knowledge of the above was what led me to compare the flight of the bee with this train.

SWARMS CLUSTERING TOGETHER; CLIPPED QUEENS.

On page 375, H. J. Schrock wishes me to explain how I manage swarms, having queens whose wings are clipped, which cluster together. In a large apiary, one of the most annoying things which happen when natural swarming is allowed, is the clustering of two or more swarms together, if the queens have their wings, and the apiarist desires to have only one swarm in a hive; but when the queens all have their wings clipped, the clustering of several swarms together need give little if any more trouble than if they came separate. I usually manage in this way: Have several cages made of wire cloth which are an inch in diameter, and four inches long, having a permanent stopper in one end, while the other is movable. As a swarm issues, the queen is caught in one of these cages; and when they begin to cluster, the cage is secured to a pole by means of a bent wire, when it is raised so as to rest just where the bees are clustering. This is done so the bees will not return before you are ready for them to do so. Now prepare your hive, and get all in readiness for their return (if you wish to have them do so), when you take your pole, and what bees adhere to it, and the cage, and carry them to the hive, when the rest will soon return. By winding the pole with old black rags for a foot or more in length, till as large as your arm, the most of them will cluster on it. If you wish to hive them on a new stand, you can get the whole swarm to cluster on the pole by moving it up a foot or so, where a half or more are clustered. Those in the air will cluster with the queen, and the rest will soon resort thither, when you can carry them where you please.

Now having explained how I manage with one, I will suppose I have one after another keep coming, till I have 8 all in one pile, as I did once. The one queen will hold the whole, so there is no particular hurry. The queens are caged as they come, and hives got in readiness, till the last one is out. No fear of the whole lot going to the woods; for if they should start they will soon come back for the queen, and cluster again. You see, I had three swarms try it once, so I know. They went off out of sight, and were gone ten minutes or so, when they came back to the queen. I supposed when they came back they would, part of them at least, retun to the old stand; but not one did so. But, to return: Having the hives all in readiness, and the caged queens (except the one with the swarms) in front of their respective hives, go to your cluster and get what you consider a fair swarm, by dropping a portion of the cluster into a tin pail, using a piece of a shingle to cut off what you want. Throw a cloth over the pail to keep the bees from flying, when you can carry them where you wish. Let them settle a moment in the pail, when you are to hive them like any swarm, letting the queen out of the cage so as to go with them, of course. Keep on in this way till but one swarm remains with the queen, when this is hived as first given for a single swarm. If you have too many bees left for one swarm after you have given bees to all the queens, carry your swarm on the pole along by each hive, and cut off a pint or so till you get them to suit you. This one item of hiving swarms which cluster together with such ease, more than balances all that has been said against the practice of clipping queens' wings.

WHAT MADE THEM GO OFF?

On page 397 I am asked where "Maggie" erred in her management, and if I have large early swarms go off in the same way. No, sir; I have lost but one swarm of bees in my life, after which I resolved two things; the first of which was, that all fertile queens should have their wings clipped; and the second was, that no brood should be given a swarm having an old fertile queen. Begging your pardon, friend Root, I opine it was that brood which caused Maggie's bees to go to the woods, as neither swarm deserted till given brood. I had never lost a swarm up to 1871, when I had been reading that, if a frame of unsealed brood were given a swarm it was sure to keep them from going off. I tried it, and the very first trial caused me to lose a splendid large first swarm. The next year after, all my queens had their wings clipped. I tried again, and 4 out of 5 thus treated tried to go to the woods, since which I give no brood, and do not have one in 25 make a trial to go off. After losing the one in 1871 I talked with friend Betsinger about it, and he said that it was the brood which caused them to go; "for," said he, "bees swarm to get away from their brood, leaving their brood behind, not having any need of it, as they have the old queen. By placing brood in the hive they are to occupy, they were placed in a similar condition to that which they had swarmed to be free from;" and I believe Betsinger to be correct. That *brood* is not a prevention to going off, is proved by the many reports in back volumes of GLEANINGS. If Maggie will clip the wings of her queens, and put only empty comb foundation, or nothing at all in the hives she puts her bees in, I think she will have no more trouble.

Borodino, N. Y. G. M. DOOLITTLE.

Friend D., I agree to pretty much all you say, except your concluding words. In regard to the rate of railway trains, I think we shall have to consider it settled, that they do run at pretty nearly the rate of a mile a minute; and the article on another page by a railway man shows that bees do move at the rate of 90 miles an hour, or about that, at times.

Now in regard to the frame of brood: You and I don't agree, or our experiences seem to have been unlike. All through the swarming season we are buying swarms of bees of the farmers almost daily, and we divide them up and put them into hives in quantities all the way from 1 to 10 lbs. Sometimes they have queens, and sometimes they have not. Surely, under such circumstances you would advise a frame of brood. Well, now, after trying the experiment hundreds of times, I can hardly remember of one case where they deserted with a frame of unsealed brood. When some green hand puts in a comb containing only capped brood, of course they go off; and where put on empty combs or frames of fdn., every little while a swarm will decamp. If they have no queen they usually scatter into neighboring hives; but a comb of unsealed brood, in our experience, "pins" them every time. Suppose we advise the A B C scholars to try it both ways, and see how they find it.

SOME QUESTIONS.

SWEET CLOVER, FIGWORT, BASSWOOD, ETC.

WHICH do you prefer as a honey-plant, sweet clover (melilot) or carpenter's square (figwort)? What is the quality of honey of each of the above plants?

What is the best plan for getting out seeds of the basswood (linden)?

When is the best time to sow seeds of the linden?

Can the linden-tree be propagated successfully from sprouts, or suckers, and will trees propagated in that way produce flowers as profusely as from seeds?

When is the best time to put out sprouts, or suckers, for trees?

I never learned to chew tobacco, so don't you think I ought to have a smoker as well as the men who have been poisoning themselves, and every one they come near, for years?

I have no information to give, except if the tops of the sweet clover are clipped off, the plants will be stockier, and produce more blossoms, and will not sway about so much, hindering the bees from alighting on them when the wind blows; it must aggravate them to *speed* for a blossom, and find they have missed it.

I was at your place before you bought the old fair-grounds; took you 2 bbls. of beeswax, and paid you 60 cts. per lb. for fdn., yet I found you so busy you did not have time to speak to me; and as your business has so increased, I do not suppose you would have more time than formerly, if I should again visit Medina, as I should very much like to do.

DANIEL SPEAR.

Cardington, Morrow Co., O., July, 1883.

The quality of the honey from sweet clover is reported good, but I do not know that I have tasted any. That from the figwort is fair, although it has been scattered through the hives so I could hardly speak definitely in regard to it. With us, many more bees are found on the figwort than on the sweet clover; but even this is governed by the season very much.—In regard to gathering the seeds from basswood, and also about raising basswoods from cuttings, see p. 398, July No., and what has been written in our back numbers. The matter has been very fully discussed, and it will pay you to follow it up by means of our copious indexes. I believe the spring is the time generally chosen for sprouting trees from cuttings.—In regard to offering a premium to those who do not use tobacco, I think, friend S., the best answer is to ask you to read the parable of the prodigal son.—Thank you for your suggestion about clipping the tops of the sweet clover. I believe it is a good way. We have now some of the Jones Bokhara, but it is so tall, and swings about so much in the wind, it would be funny if the bees could get the honey at all, in a windy day. I think I will run the mowing-machine over them, having it set up very high.—Now in regard to spending but little time with visitors: Friend S., my time, and all I have, belongs to the Master. I want to use it in such a way as to please him. During the busy season, when matters of great moment are constantly being deferred to me, and when many might be greatly wronged did I stop to talk and visit, where does my duty lie? There are times when I can stop and be sociable, without very much inconvenience; but at other times I should feel guilty if I let my work remain undone longer than to briefly shake hands and then take it up again. I know you better now than when you called before, and may be I could be a little more courteous if you should make me another visit. Of late, Ernest has taken charge of visitors pretty well; and as he is now a little over 21, may be you will enjoy a visit with him just as well as with myself. Come and see us, any way, when you can. To look after visitors properly, it takes one of our best men, and one thoroughly conversant with every part of the establishment. In the summer time we usually have visitors all the while—sometimes several parties of them.

FROM THE WEST INDIES.

NOTES FROM "THE LA FE APIARY," ST. DOMINGO.

I HAVE just completed the fixing-up of the above-mentioned apiary, after some months' experimenting with different kinds of hives, and finally settled upon the Van Deusen-Nellis-Tobother's West-Indian Simplicity hive, which is the same as the Van Deusen-Nellis, with a few improvements in ventilation, roof, and frames, which I think gives me the privilege of adding my name, especially as the hive in its present state answers all that can be claimed for it as a model West-Indian hive. These alterations I had made by Mr. Theo. Houck, of Canajoharie, N. Y., to suit our very hot—sometimes wet—climate, after studying the matter for several years past, and from which I am in hopes of getting very good returns in the shape of extracted honey, as my intention is to tier up several stories, and work the extractor.

I have received 100 two-story hives, and am so well pleased with them that I have ordered and am expecting 100 more by return steamer, and my intention is to work up on an extensive scale by degrees. I have transferred 50 colonies within the last month past, from hollow palm logs, into these hives, and they are actually working 50 per cent better. I have still 50 more colonies to transfer. Competent help is not to be had here; consequently I get along slowly but surely, having to do it all myself. I find the easiest way to transfer is as follows: I have a lot of ¼x¼ pine strips prepared, ½ inch longer than the width of the frames (which are the Hofman-Langstroth) with the top-bars split open to receive the comb foundation; one end of these strips is fastened with fine wire about 1 inch apart, and the other end has a piece of wire attached to twist it fast into the natural comb and frame, to keep this in place until the bees fasten them properly, which they do in 24 hours. I then lift up the log to be transferred, on to an empty barrel, which stands on end, and place immediately under it the lower story of a hive in which I have 2 frames with comb foundation drawn out, and in the center one frame of brood taken from another colony. I then put the smoker at work briskly at the other end of the log, at the same time striking it with a club, which causes the bees to get up and out of the end of the log resting above and over the hive. I then brush them down into the body of the hive, when they immediately go for the three frames; and as the hive is exactly in the same spot where the log stood, all the fielders come into the hive, mount the frames, deposit their spoils, and go out again, apparently undisturbed. I then cut out whatever worker brood there is in the log, cut them to suit my frames, which I have one by one put upon my transferring-bench, and with the pine strips fasten them into the frames. I place all the brood together in the center of hive, and all the other combs with honey and pollen on either side of these. Sometimes the natural combs of a strong colony will fill 18 frames with natural comb, which makes it then a two-story hive; when the last frame is put in the hive, the few bees left on the wreck of the log are then brushed off into the hive; top or roof put on, and the bees scarcely know the difference at the moment; but in 24 hours they show a most perceptible difference in work. They have then the combs all fastened in the frames, eggs laid in the two frames of drawn-out foundation, and the general work going on at a great rate. I then take off the body of the hive and clean off the bottom-board, detach the transferring-sticks, and examine all the frames to see that they are in proper order. I have not as yet had the bad luck to injure a queen in transferring, although I work pretty quickly so as to avoid robbing, as I am working in an open outdoor apiary where one is very much exposed to such mishaps. Should I find no signs of a queen in the hive 24 hours after transferring, I would give them a comb of eggs and larvæ to get one from, and the moment they attempt to build queen-cells, I should take the frame with them on from them, give it to my queen-rearing nuclei, and would give them a prolific queen at once; but as yet I have been saved this trouble. I am trying to have queens on hand for such emergencies.

This apiary is very pleasantly situated, about an hour's drive from the city of Santo Domingo, West Indies. It is not in any of the very best localities for bee culture; but as other circumstances prevent me locating in a better district, I shall have an opportunity to judge of and report the difference of this and other localities. These is, however, no apiary within three miles around the "La Fe," and therefore I think the pasturage quite sufficient for about 500 colonies, which I intend to put on gradually.

I saw in several of the bee-papers that the bees did not work on tin; but this I beg to contradict, as I now have on hand two tin separators on which the bees have worked entire combs filled with brood. This was done in a Quinby standing closed-end hive. I put in some tin separators between the top of the frames, and in a hurry put in a swarm of bees, without putting guide-comb or fdn., and they started working on the sharp edge of the tin; they fastened the comb on both sides of the tin, so as to get it the full thickness for brood, with which they filled it the whole size of the frame. So this is proof that bees *will* work on tin — yes, and even so far as to fasten two pieces of tin together, either with comb or propolis, as I have both cases in this apiary. The bees here are the common brown-black German. They are great hands in using propolis; every crack that is under ¼ inch open is securely sealed up by them; and even the frames that are close fitting on top and sides a couple of inches, they fasten quite close.

Our prospects for the expected honey season are rather poor. We have had very dry weather; the spring opened wet, and has been followed up by a hot and dry season. Flowers have been scarce, and the palms are late in blooming; but as long as there is good life in the bees, there is hope. No old bee-keeper can afford to go into Blasted Hopes, and I am one of those who say never die, although apparently every thing seems to come to an end. But, I forgot. I am just beginning here on a scientific principle, and feel proud to say I am the first in this island to do so. By next mail you will receive No. 2.

L. IDA TOBOTHER.

Santo Domingo, West Indies, June, 1883.

We are much pleased indeed, friend T., to get so favorable a report from you in regard to this part of the world. It has long been an enigma in the minds of many, why a clime so highly favored by Providence as yours doubtless is, should make so poor a return for the "ten talents" it has received. Properly worked up, it does seem as though apiculture in the Antilles would give us some statistics in comparison with which ours would seem small. When known to be a source of revenue, the government there would be likely to foster the industry, and thus give it a sure foothold. With our sister-continent of South America waking up to the importance of this subject, especially in Brazil, under the progressive Dom Pedro, what may we not expect of our heteroscian neighbors? Please give us something more, by all means, especially in regard to the flora of your island.

HOW TO BUILD UP AN APIARY.

WHAT JUDICIOUS FEEDING MAY DO.

I NOTICE in June GLEANINGS that several tell how smart their bees are. I think mine are smart too. My two swarms came through the winter in good shape, with a great quantity of honey to begin business with in the spring — so much that I swapped with them an empty comb for a full one just as winter was closing. Hive No. 1 appeared to be almost full of bees, and No. 2 about one-third full. At the suggestion of a friend I made a feeder and put it on top of the frames quite early; in fact, before the snows had ceased to come, and gave them just a little sugar syrup to encourage them, and also a little flour just outside the hives, on such days as they could fly out. The result was, they began to bring in pollen before I supposed there was any thing to find, and filled that empty comb right away — built comb up into my feeder, so that I had to take it off. When I took the comb out of my feeder I found eggs in every cell. Seeing that they were getting crowded, on the 10th of May I put on an upper story of sections to No. 1, and a half-story crate of small frames to No. 2. On the 20th of May, No. 1 swarmed — a good one too; May 29th they swarmed again; and on June 1st, swarmed again, and quite a respectable little swarm. June 2d, No. 2 swarmed. This makes four swarms in 13 days, from two hives, and I find that No. 1 had worked just a little on the fdn. in upper story, and No. 2 had filled the half-story with comb, and had begun to cap some of them over; and to-night I see that the first swarm has filled their hive, except part of one frame, and shall have to put on suplus arrangement immediately. DANIEL H. JOHNSON.

Danielsonville, Ct., June 5, 1883.

THE TORONTO CONVENTION.

SOMETHING FROM FRIEND JONES ABOUT IT.

THE National Bee-keepers' Association will hold its annual convention in the City Hall and Council Chamber, in the city of Toronto, on Tuesday, Wednesday, and Thursday, the 18th, 19th, and 20th days of September, during the second week of Canada's great Fair. All the railroads in Canada will issue tickets during this week, good to return up to Saturday night, the 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates by addressing me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.

D. A. JONES, *President.*

Beeton, Can., July 3, 1883.

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

THREE years ago I sent to N. C. Mitchell $5.00 for the privilege of using his patent bee-hive. In his circular he proposed to send a treatise for beginners, and one queen in nucleus box (Italians). I received nothing, except his patent-right to use his hive; and as I know nothing whatever of the business, I have had quite a lonesome time.

F. R. COLLARD, M. D.

Wheelock, Texas, May 25, 1883.

No doubt you had a lonesome time, friend C. I rather imagine that most of the folks who have been waiting for any thing except promises from our old friend Mitchell have found it quite dull, waiting year after year. We have had so few reports regarding friend M. of late, that the heading, "Humbugs and Swindles," was getting dusty, as our proof-reader remarks. As your report was a three-year-old one, it does not give us any thing fresh, after all. Well, I think we will try to stand it, if we *don't* have any H. and S. department for a year. But perhaps it might be well to hang out the "shingle" occasionally, for the benefit of those similarly inclined. Such a warning "is not a terror to good works, but to the evil."

Bee Botany,

OR HONEY-PLANTS TO BE NAMED.

ENCLOSED I send you samples of two honey-plants, or weeds, which I think, from the way the bees work on them, must be good. Bees worked on them both all day, and after sundown on the 23d day of last May, and while clover is in full bloom too. I consider the small red flower a very bad weed to have on a farm, or any place except on the roadside. It grows here on the town commons. No stock will interfere with it. The black flower with broad leaf grows in the woods on very rich land where stock do not tramp about much. I never noticed either plant before this year, as a honey-plant; and as they are new to me, I should like to find out their names.

Bees are doing well; have had no lack of forage since fruit-trees bloomed. TH. S. CHAPMAN.

Rocheport, Boone Co., Mo., May, 1883.

Relative to these flowers, Mr. Devol says:

BURR-FLOWER.

The flower inclosed ("found on rich land") is the "Waterleaf," or "Burr-flower" (*Hydrophyllum appendiculatum*). It is a very common plant here, found mostly in rich, moist woodlands, as stated by Mr. Chapman. It is an herb with alternate, sub-palmately 5-lobed leaves, the lobes dentate, diverging. The whole plant is covered with rather soft, spreading hairs. Sepals subulate, with a small appendage between the lobes. Corolla bell-shaped, 5-lobed, with small appendages inside; stamens 5, inserted on the corolla. Stem 12 to 18 inches high, watery, branching; leaves roundish in outline, with the lobes pointing outward like a star. It blooms in May and June, the flowers blue. It is a rather rough plant, and is of no economic importance. It is easily broken down by stock tramping among it, and readily killed by mowing.

HOUND'S-TONGUE.

The second plant is *Cynoglossum officinalis* or common "Hound's-tongue." It is a hairy perennial plant growing in waste grounds, 1 to 2 ft. tall, leafy to the tops, with lance-oblong leaves, sessile or clasping at the top, petiolate near the base; calyx 5-parted, silky pubescent; corolla funnel-form, dull red, orifice closed by 5 scales; achenia 4, covered with hooked prickles, catching on to the clothing, and fur of animals, when mature, thus being widely distributed. Leaves 6 to 10 inches long, 1 to 2 broad, pubescent. The whole plant is of a dull green color, with a disagreeable smell. It is a native of Europe, but is now widely disseminated in this country, found principally in pastures, by roadsides, and in waste places; blooms in May and June. It is a vile weed, and should be destroyed by cutting off at the surface of the ground in spring and early summer.

W. S. DEVOL,
Botanist Ohio Ag. Ex. Station.

FRIEND HARRISON'S EXPERIENCE.

SUGGESTIONS IN REGARD TO COVERING THE FRAMES IN WINTER, ETC.

I WENT into winter quarters last fall with twenty swarms of bees on summer stands, Italian, all but two in chaff hives; these latter were in the Simplicity hives. Those in chaff hives I gave no further protection than what the hives afforded. Those in the Simplicity hives I protected by setting a shock of corn fodder over them, the fodder being securely bound with two bands near the top. They all came out strong and in good shape this spring. On the 27th of March last I sold them all at public sale. I use bagging for covering over the brood-chamber. I buy Stark A grain-sacks. These sacks cost from 20 to 25 cts. apiece. One sack will make four covers, if properly cut; this would make the price of each cover from 5 to 6 cents, which is as cheap as any other cover now in use that I know of. I like them much better than any I have ever tried. I have never been troubled by the bees cutting holes through them. The bees will go to work and soon cover them over between the frames with propolis. And I have observed for a long time that bees are not apt to gnaw through any thing that they have once covered over with propolis. Before putting on these covers for winter I first lay a thin cake of candy (about ¾ of an inch thick, made according to directions given in A B C) on top of brood-frames, and then put on the cloth or bagging, tucking it well down at the edges, so as to leave no chance for any bees to crawl above; then I put on chaff cushion, and after having put them in this shape with plenty of stores, I consider them pretty safe for any emergency. You may perhaps wonder why I give them all candy in the fall when they have plenty of stores. I do this to prevent dysentery; for I am a strong believer in coffee A sugar as a remedy for dysentery; and I also believe in the maxim, that an ounce of prevention is better than a pound of cure; and that most, if not all remedies, if used at the proper time, will also prove a preventive, is a well-established fact. Since adopting the above plan, I have no trouble with the bees spotting their hives. I believe that bees will do their own doctoring, if the means are only placed in their reach.

I experimented last winter with one of my colonies by removing the bagging, and using in its stead a frame made out of laths 1¼ inches wide, with a strip across the middle of the frame; to keep the wire cloth from sagging, I tack it on top of this frame, and then place it over the cluster. This frame should be made so it will go easily inside of the upper story of the chaff hive. I like this device better than any other that I have seen yet, for the following reasons:

It makes feeding in the upper story very convenient. All you have to do is to lay your cake of candy on the comb-frames; drop in your frame covered with the wire cloth; put on your chaff cushion, and the work is done. Or, if you want to feed syrup, just raise up your cushion, take out your wire frame, and set a tin pie-plate on the brood-frames; put on your wire frame, and pour the syrup right through the wire cloth; and when the plate needs refilling, all that is needed is to lift out the cushion, pour in the feed, put back the cushion, close up the hive, and the job is done. This operation can be performed in so short a time that but little warmth will escape, which is a very important thing in cold weather.

This device has the same advantages that are claimed for the Hill device; viz., it forms a warm-air chamber over the cluster during cold weather, giving the bees a chance to have free access to all their stores without having ugly holes punched through the combs to accomplish the same end.

Another advantage is, you can always see just what condition your bees are in by simply raising the cushion, and without the possibility of a single bee coming out and getting lost. This arrangement may perhaps be very old to you, and may have been in use long ago; but if it has, I am not aware of the fact; and if it has ever been in use before, and has been discarded for good reasons, I should like to have them from some practical bee-keeper, for I am always ready and willing to learn. You may perhaps find fault with this arrangement on account of too much upward ventilation; but if this should be the case, I must beg leave to differ with you on that point. I think that more mischief is done in wintering by not giving upward ventilation enough, than by giving too much; but, of course, both extremes should be avoided as much as possible. I can show you some old box hives right here in this neighborhood, with cracks in them from top to bottom, over ½ an inch wide, and the top of the hive so cracked and warped that the bees can go in and out where they please. These cracks were once chinked up with mud or putty; but this has dropped out long ago, and yet their owners tell me that the bees had wintered well for years in these same hives.

I am a strong believer in furnishing bees with water, and especially during the brood-rearing season; but I do not believe in obtaining the supply by the perspiration, or sweating process.

Bee-keeping on the improved plan has been very much neglected in this locality. There are a good many bees kept here, but most all in box hives and hollow logs, or bee-gums, as they call them here. The bees are about all blacks. I have not seen any pure Italians since I came here. But it looks to me as if there were going to be a regular waking-up among the bee-keepers here, and that, too, before the present season is over.

I think this a very good locality for bees. I bought a new swarm the other day from a neighbor, and the way they are bringing in the honey is enough to make any bee-man feel well. The fields here are just covered with white-clover; there is also a good deal of alsike clover raised here for hay and pasture; there are also a great many honey-bearing plants growing wild here, such as motherwort, wild mustard, catnip, smartweed, Spanish needle, etc. This is also a great basswood country. If your supply for section boxes should run out in the eastern part of the State, just let us know, and we will supply you with all you may want. G. W. HARRISON.

Wharton, Wyandot Co., O., July 9, 1883.

HONEY IN OLD APIARIES.

SOME WORDS OF WISDOM FROM FRIEND MORRIS.

"He that observeth the weather shall not sow, and he that regardeth the clouds shall not reap."

I NEVER fully realized what Solomon meant by that "wiser" until to-day. This spring I regarded the clouds, and I observed the winds, and I saw that it did rain, and was very cold and backward; so I did not sow, nor feed my bees, and therefore they did not increase and wax strong in numbers, and, lo! when white clover came in great abundance, and the perfume did fill the air, yea, even into our houses, my harvesters were few, therefore my crops not great. Whereas if I had observed that white clover was not winter-killed, and was promising a big yield, I would have taken Solomon's advice, and would have sown, otherwise fed, crowded my bees to their uttermost; then when the harvest came I could have raked it in. I calculate I have lost just one ton of white-clover honey by not feeding up in spring.

All springs are not alike, however. Last spring, one year ago, I fed, and was ready; and, lo! white clover was "ausgespielt," and 3 or 4 colonies died from too much "muchness" of bees, and too much emptiness of honey, before I knew what was up. Now the point is, we must govern ourselves in spring management by the prospects; and I think we can tell pretty well what white clover is going to do, whether it is winter-killed or not.

DO BEES FLY 90 MILES AN HOUR? WHY NOT?

There are some of the migratory birds that fly at the rate of 75 miles per hour for 48 hours. That wonderful bird called the albatross is said to fly at the rate of 100 miles per hour. I saw an article not long ago to this effect: A sportsman in England laid a wager that he could pick six hounds from his pack that could run past a railroad train at full speed. Accordingly a flat was hitched behind an engine, and the train started out, the sportsman standing on the open car in full sight of his dogs, with gun in hand, the dogs following on the track. The throttle was pulled out at once, and the engine "pawed the dirt," so to speak, and when speed was attained of one mile a minute, he pointed his gun ahead, and fired it into a wood. Instantly the dogs sprang from the track, past the car, into the wood, and out of sight, like a flash. So goes the story.

Now as to trains running 60 miles an hour, they certainly do, and faster. The train that carried the lamented Garfield from Washington to Elberon attained the enormous speed of 70 miles per hour. I am well acquainted with a retired passenger engineer of 15 years' run on the Illinois Central R. R., and he said to me, on inquiry, that he had often run specials at from 50 to 65 miles an hour. There are several instances on record where, during the late war, trains were run just as fast as fire and water could make them go. So far, I think friend Doolittle is "kerect."

Now, on the other hand, philosophy says that tornadoes travel from 40 to 90 miles per hour, and that wind blowing 40 to 50 miles destroys barns, houses, haystacks, etc.; while a wind blowing 70 to 80 miles destroys everything in its path. Now again, one can not stand within 3 or 4 feet of a train of cars going by at 60 miles per hour without being blown down, and perhaps sucked into the vortex. There is a vast difference between a bee going 80 miles per hour, and a tornado or cyclone with their greater force. The progressive motion of a cyclone is from 18 to 40 miles, while the rotary motion is 40 to 120. If a wind blowing even 60 miles per hour, low down, should strike friend Doolittle, I am afraid he would never write us any more articles.

Rantoul, Ill. H. M. MORRIS.

It seems to me, friend M., you do not bring out the true meaning at the head of your article, as I see it. The way I understand the text is, that one who stands with his hands in his pockets, looking at the clouds when he ought to be pitching his hay on the wagon, would not be apt to turn out a very successful farmer, and I guess it is so with bee-keeping.—I think I should advise feeding *every* spring, and then if the bees got their hives so full of young bees that provisions ran out, I would just feed them white sugar, and sell them off by the pound.—I think I shall have to give up about the speed of bees, railroad trains, ducks, and I do not know but hounds also; although I feel very much inclined to object a little to that "yarn" of yours about the hounds beating a railroad train.

NEW HONEY BY THE TON.

HOW FRIEND ECKMAN MANAGES AWAY DOWN IN TEXAS.

BEES are doing finely. I started in the spring with 120 swarms in good condition. I kept down swarming as much as possible, but had to hive 40 swarms; commenced extracting June 4; have taken out, up to date, 9500 lbs. extracted, and 1200 1-lb. sections. I am still extracting, and have three months to run yet. I did all the work myself, except my better half, who winds up the buckets and draws the honey in small vessels for me.

Neighbor Johnson and I took a flying visit last week out to Luling, 160 miles west, to see friend Tadlock. We found him a very pleasant gentleman, and well up to the times in bee-keeping; but his bees are in poor condition, on account of extreme drought, he having to feed until a short time ago. Bees in Northern and Western Texas are all in the same condition as his. I have already sold 4000 lbs. of my crop, and am getting orders nearly every day. I put up my honey in nice neat packages, and put attractive labels on them. My packages run from 2 to 60 lbs., extracted. Could I have had more help, I could have gotten more; but am very well satisfied.

J. W. ECKMAN.

Richmond, Ft. Bend Co., Tex., July 16, 1883.

Heads of Grain,
From Different Fields.

HOW FAST CAN A BEE FLY?

ON page 301, June GLEANINGS, John Phin argues that a bee can fly as fast as a pigeon, because it is stronger in comparison to its size. This is not a conclusive argument by any means. I have seen a jumping mouse, about six inches long, including three and a half inches of tail, leap four or five feet at a time, eight or ten times his own length, and yet I could outrun him. So with the bee and pigeon; though the bee is stronger and swifter in comparison to its size, yet I think there can be little doubt but that the actual speed of the bird is much the greater.
BURDETTE HASSETT.
Howard Center, Iowa, June 25, 1883.

A QUEEN THAT WOULD STING WORKER BEES.

I received the queen all right, and put her in a one-frame hive that I had made for a queen a few days before, but they had killed her. They were mostly all young bees, as nearly all the old ones had returned home. I put the queen in, and the old bees that were in the hive commenced to bite her. Whenever one bit her she turned round and stung it. Some caught hold of her by the legs, but she soon stung them to death. Do not say I am mistaken, for I saw her curl up on them and thrust her sting into them. As soon as they were stung they fell down on the bottom-board. This is the first case of a queen stinging workers that I ever saw.
JOHN DALLAS.
Sharpsville, Mercer Co., Pa., June 26, 1883.

I know, friend D., that we do occasionally have a queen that will sting worker bees; and it has been suggested that we might have one that could be turned loose in any colony of bees, and fight her way through. It seems, however, that yours did not succeed in doing this, after all, for she was killed finally. I have known only one or two cases where a queen would deliberately sting worker bees.

BASSWOOD; AT WHAT AGE IT BEARS HONEY.

Please tell us how long it takes basswood-trees that are grown from the seed, before they will bloom. Bees are doing A 1 now. There is an abundance of feed — white clover, alsike clover, and red and black raspberry. Basswood looks well; and with favorable weather I see nothing in the way of our getting more than an average crop of honey. Although the spring has been cold and wet, our bees have not ceased to breed; so at this time, the hives are full of workers, ready for business.

APPLE-BLOSSOM HONEY.

A few of the colonies stored 30 lbs. of the very whitest kind of comb honey from apple-blossoms.
A. W. OSBURN.
Water Valley, N. Y., June 23, 1883.

Basswood-trees will bear at a very early age, perhaps five years from the seed. But it will perhaps be ten years before the bloom will amount to any thing for honey, and very likely ten more on top of that before it is ready to give a full crop. Our basswood orchard is about ten years old, and many of the trees were three or four years old when transplanted; but even now there is only here and there a tree which can really be said to be full of blossoms.—I am very glad indeed to see the reputation of apple-tree honey coming up. The great drawback in harvesting the crop seems to be in having the bees strong when it comes into bloom.

UNITING BEES.

I had a small swarm the first of the week. I had a weak colony, and after taking out the old queen I united them. Any thing wrong in doing this? The next day I looked at them, and they were trying to kill the queen, and did do it. What was the matter?
Zanesville, O., June 23, 1883. L. GRAY.

And they did exactly as I should suppose they would, friend G. It is never safe to put bees in with another colony, no matter how few or how many, under any circumstances, without at first caging the queen or watching her to see if they molest her. It is true, bees are often put in thus, without the loss of a queen. But there always is liable to be danger. Smoking them well at first when they commence will many times make them behave. Where bees are lifted from combs, and all from one hive, and put in another, there is, perhaps, less danger; but if the queen is a valuable one, it is always best to look after her for a few hours.

AN OLD-STYLE BEE-KEEPER.

I have had bees all my life, and have 50 stands now. I know nothing about frame or improved hives, but I can handle bees as I please. I have had but one sting in handling 50 or 60 swarms. I would like to have my bees in good shape, and make a business of it. My bees are in nail-kegs, cracker-boxes, flour-barrels sawed in two, log gums, and any thing that I could pick up. W. D. WERNER.
Prairieville, Ark.

Friend W., I do not know but it would be lots of fun to handle bees in your nail-kegs, boxes, etc., but it seems to me I would rather have a few more stings, and get a little more profit from my bees than you probably do by your present mode of management. We send you the necessary information in regard to the modern style of working with bees.

NEW SWARMS ABSCONDING.

We had our first swarm of bees come out on Sunday, June 17, 1883, at half-past 9 o'clock A.M. We hived them without any trouble, and then let them stand on a sheet on the ground, under a tree. It was a very warm day, and the sun shone on the hive most of the time, and about two o'clock the bees came out of the hive and went to the woods without saying good-by, or any thing else, and so we lost them. Now, please tell me if you think it was our fault that they went off; if being in the hot sun; or do you think to clip the queen's wing would have saved them? I don't want to lose any more. The bees begin to hang out some on the other hive.
MARTIN V. HOTELLING.
Dansville, Liv. Co., N. Y., June 19, 1883.

I think it was the heat of the sun, principally, friend H., that made them come out. Besides putting them in the shade, I would put in the comb of unsealed brood I have been telling so much about; but in any case don't let the sun shine on a colony just hived.

If you do that, they will likely come out, brood or no brood. Only yesterday one of the girls in the apiary was picking some bees off from a comb to put into the queen-cage. While she did this she had left the hive uncovered, and the sun shone in against the side of a comb. Before I could get the hive covered, the comb dropped out, fell against its neighbor, and that would have dropped out in a moment more, and so with the contents of the whole hive. You see, friends, what mischief a few minutes' shining may do in a hot summer's day. Perhaps you like the business of mending up broken comb, and resuscitating suffocated bees; but if you do, I do not. One reason I do not like it is, because it consumes valuable time; and neither combs nor bees are ever quite as good again after being broken down or partially suffocated.

DO BEES STEAL EGGS, OR CARRY EGGS FROM ONE COMB TO ANOTHER?

I have settled that matter in my own mind. Last summer I had two black stocks and one Italian nucleus. These were all the bees I had at the time, and there was not another Italian bee within 14 miles of me that I know of. Well, I had the misfortune to set the chaff cushion on fire in the nucleus hive. It did not burn much (only the top was burned off), but it made smoke enough to drive all the bees out of the hive; and before I could induce them to return, my black stocks had robbed it completely, not only of honey, but every egg was gone, and the larvæ were starved dead. I did not think much of it at the time; but some three weeks or more afterward, I had lots of young Italians in my black stocks. Now, where did they come from? I leave you to answer the question for yourself and others. I am pretty well satisfied. HERBERT SHAW.

Broadhead, N. Y., June, 1883.

Friend S., you have given us a most important fact, and I see but one possibility of your being mistaken. This is, that bees mix to a considerable extent from one colony to another. For instance, if you have one colony of pure Italians, and five colonies of blacks, you will, in a very little time, find Italians sprinkled all through your black colonies. I do not know why this is, unless because it is the young bees, when out playing, come to the wrong hive. In your case you say you had *lots* of Italians in your stocks. Now, if you saw Italians hatching out of the brood-combs of hives containing black bees and a black queen, your proof is conclusive. Did you look to see if the young bees were Italians? If you did, we may consider the matter settled. It will be pretty difficult to make such an experiment, because robber-bees seldom take a notion to carry home eggs and larvæ, as you think bees must have done. Can we have any more facts in regard to this strange matter?

RAISING WAX INSTEAD OF HONEY; A NEW IDEA.

Inclosed you will find some drone-cells containing wax. This, I think, was derived from the honey which the cells contained. Has there ever been a process to make artificial wax? I think, before many decades bee-keepers will be wise enough to make their own wax. If the bees can make it from honey, why can't we, with the proper utensils? These cells you will see are fair samples of wax, very likely made from dark honey. They were out in the bee-shed all winter, which probably had a tendency to transform it into wax. One cell I found which contained honey, but began to crystallize along the walls, and resembled wax. What is your opinion in regard to it? H. J. SCHROCK.

Goshen, Ind., June 24, 1883.

It is an actual fact, friends, that the piece of comb sent by friend S. contains drone-cells filled with very fair wax. The wax has very much the appearance of having been melted and poured into it. How it came there, I am unable to tell; but I can not yet quite accept the idea that the honey the cells contained had turned to wax. Even if it did, as the established rule is, that it takes from 10 to 20 lbs. of honey to make one of wax, the cells should contain only a small portion of wax. Friend S., is it not possible that some melted wax had, at some time or other, been run into these drone-cells by accident or otherwise? I do not think we are quite ready to go into the business just yet, are we?

FOREIGN BEES.

The following comes from the *Transcript*, Lexington, Ky.:

> Yesterday some bees were brought into our office that had just been imported from Italy. They had been sent by express in a neat little hive, with honey in it. They can not speak a word of English, but they sting in the American language. The importation was solely for the sake of the queen that was in each little hive, and the few common bees sent along with them were simply a retinue for their royal highnesses; the queens, like royalty, queenly preferring to starve to death rather than do any menial service for their own sustenance.

BEES THAT CARRY LEAVES.

I received the bees to-day noon, and guess they are all right. There were a few dead ones — no more than I expected. Mr. Root, did you ever see bees carrying leaves? There are some bees working in the gable-end of our house, in a knot-hole, carrying leaves in. They look like the Italian bee. I never saw any carrying leaves before. Several came and saw them carrying, but would not believe it. JOHN N. CORBETT.

Malden, Bureau Co., Ill., June 27, 1883.

The bees you allude to, friend C., are not honey-bees. They are a species of wood-bees, or borers, and the leaves they carry are for making nests for their young. Some of these borer-bees are very prettily marked, and are not unlike bright Italians, if one does not take a very close look at them. They gather little if any honey, however; and, if I am correct, they visit the flowers mostly for pollen.

USING WIRED FRAMES FOR NATURAL COMBS.

We extract the following from *The Kansas Bee-Keeper*:—

> Last season we ran short short of comb foundation; and having no frames at the apiary but wired ones, we put in some two hundred of them, when, much to our surprise, the bees not only readily accepted them, but seemed delighted to find the wires so convenient for supporting the newly made comb, and in every frame left the wires exactly in the center of the comb. It worked with us to our entire satisfaction; so much so that, when we came to extracting honey from those newly made combs, we found them worth at least twice as much as the unwired ones.

HOW MANY BEES MAKE A HIVEFUL?

It strikes me that when the bee-mathematicians have attempted to tell us how many bees do or ought to constitute an ordinary swarm, they have left many interesting points still in the dark. As I am a mathematician myself, I will tell what I know; or, rather, what conclusions I have arrived at.

A Langstroth main frame being 16¼ inches long and 8¾ inches deep, inside measure, the surface measure both sides of comb would be 284⅜ inches. This, if all worker comb (25 to the inch), would contain 7100 cells, or 71,100 for a hive of 10 frames. But a bee, after she is hatched out, being about ⅝ of an inch long, covers the space of 3 cells. Therefore if we open a hive and find all ten frames covered as thickly as the bees can stand on the combs, there would be just 23,700 bees. If in layers 2 bees deep, 47,400. It is needless to say, that such a swarm could spare half of the bees above to work in surplus boxes, 50,000 bees; then in a good working swarm, 20,000 to 25,000 would be sufficiently large to winter safely; and I am induced to think that our swarms average even less than this during the winter season. Again, if the bees consume 20 to 25 lbs. of honey during winter, it would be at the rate of one pound to each 1000. Many other interesting things could be figured out; but this will do, I think. T. L. RIGGS.

Portland, Oregon, May 29, 1883.

WM. F. CLARKE, AND A WORD IN REGARD TO HIS PRESENT WHEREABOUTS.

The ways of Providence are mysterious, but always wise and kind. For some not yet manifest reasons I have been pitchforked away up into this far-away region, where I have been editing a daily and weekly paper for the past nine months, and have been busier than I ever was before in my life. How long I may stay is at present uncertain; but the path of duty was made plain to come, and I doubt not it will, in due time, be made manifest whether I am to remain or depart. I have been knocked clean out of bee-keeping for the time, having felt both too unsettled and too dubious about this climate to do any thing in that line. But after an experience of the steady dry winter weather, and a sight of the gorgeous prairie flora in summer, I am inclined to think that, even so far north, bees will do well in the hands of skillful manipulators. If I stay here I shall certainly give them a trial.

WM. F. CLARKE.

Winnipeg, Manitoba, June 23, 1883.

HOW TO TELL WHEN THE SECTIONS ARE FILLED, WITHOUT OPENING THE HIVE.

How do you tell when sections of honey are capped, without looking previously? J. F. KLINE.

Grigsby's Bluff, Texas, July 1, 1883.

At first thought, friend K., I should have said there was no way; but it now occurs to me that I did find a bee-keeper last summer, Mr. George Carrington, of Weymouth, Ohio, who had a plan of telling which sections were filled, and which were not, in the 1½-story hive, without opening it. I saw him raising the covers to his hives, and going about, rubbing the sections with his finger, as if he would test the smoothness of their basswood tops. I finally asked him why he did it; but almost before he could reply, I noticed that some of the sections gave back a different sound while his finger glided over them, from what some others did; and it soon transpired that those solid with the chunk of honey they contained seemed to have a different feeling, as it were, by simply passing a finger over them almost as fast as you could touch them. Try it, friends. Just raise the cover to your 1½-story hive with one hand, and with the forefinger give the tops of the sections a little brush. The empty ones give back a hollow sound, while the filled ones have a dull "thud," as it were, when they are touched.

GOING OFF WITHOUT CLUSTERING.

Last summer, about the middle of June, while at a hive taking off comb honey, a large swarm of black bees just in front of and to the left of me began coming out. I went immediately to the hive, thinking that I could find the queen as she came out, but did not. After I had looked for her until I thought she was out and on the wing, I looked up to see if the swarm had begun to settle. To my disgust, I saw they were not alighting, and did not intend to do so. The swarm was all out, and they were in a compact bunch about 10 or 12 feet in front of the hive, and about 6 or 8 feet above the ground. It appeared that not a single bee ever looked back toward the old hive, but they kept their heads turned toward the woods, which was just across the run bottom, hardly one-fourth mile away; and for that timber they immediately started, and I kept them company almost to the top of the hill, where they entered a hollow in a small oak-tree that bees had been in a few years before, and had died. This was a first swarm; queen one year old; came off at eleven o'clock A.M., and left 56 one-pound boxes nearly finished. Cut the tree that evening; brought them back, and made them finish that honey, and make me nearly 56 lbs. more. J. A. BUCKLEW.

Clark's, O., June 11, 1883.

SWARMING WHILE IT RAINS.

I have but just commenced in bee culture, and find myself deeply interested in the little workers. I started with three colonies, May 6th, and now have an increase of three — two by artificial swarming, and one natural swarm. All are strong, and doing finely. Have taken 25 lbs. comb honey from original swarms. My natural swarm acted a little differently from your theory in A B C, and I should be pleased to have your opinion on the subject. They came out right between two showers of rain and clustered within 50 yards of the apiary, on a willow; and although I was not longer than 10 minutes in hiving them, they were, as well as myself, pretty well "soaked" with rain before it was completed. If I mistake not, the A B C says they are not likely to swarm during any thing like threatening weather; and after coming out, often go back to await a better day. They were not at all crowded for room, having 3 frames almost entirely empty. It puzzles me. Please help me out. I have started my apiary after the style mentioned in A B C, as the Vineyard apiary. A. T. SHOTWELL.

Somerset, Ky., June 9, 1883.

AN ENTHUSIASTIC A B C SCHOLAR; CHAFF HIVES, ETC.

Here is my report for the winter and spring. I packed 30 colonies last fall with chaff on their summer stands; 29 came through safe, and as bright as a new dollar, with no signs of disease, and they gathered considerable honey from fruit-bloom; but the cold wet weather through May caused me to go to feeding to keep up brood-rearing. But to-day, June 18, they are just booming on white clover and poplar. I tell you, it does me good to see how they rush out to work these bright warm mornings, and to see how fast they can fill up. I have all of my bees in the Langstroth frame, but have been using the Langstroth, Simplicity, and chaff hives. I am working them into the chaff hive as fast as I can get them made, for I can get better satisfaction from those kept in chaff hives. I will give you my report at the end of the season. JNO. R. CROOKS.

Keiths, O., June 18, 1883.

One of the greatest yields of clover is in progress in this locality that I have yet seen. There is an enormous crop of white clover here. Every old idle field looks almost like a white sheet, and it seems to be thriving everywhere, where it has got rooted. For this locality the yield of honey is very great, where swarming is kept down. Bees have the swarming fever terribly, and I can not control it with boxes; but the colonies with full upper story for extracting seem to be getting down to business.

I have extracted up to date about 100 lbs. of clover honey from 4 colonies. I could do much better; but I am not a muscular man myself, and could get no one competent to help me. I have got behind, and can not catch up. The orders for brushes come pretty slow, and I am of the opinion that bee-keepers do not put much faith in our brushes, or else they are overlooking the matter. I must say, if it *is* I who am advertising them, that I have been using one that was put up to sell, and no better than those we have been sending out, if as good, and I would not do without it for $1.00 now. I find it second only to the smoker and veil. I have to use a veil, as I can not stand stings in my face. Here is an extract from our good friend Chas. F. Muth's letter, after using a sample brush I took him, May 25: "I gave a fair trial of the one you left with me. They are nice, easy brushes; I mean, easy on the bees, and answering their purpose first rate. * * * * * It would be an improvement, I think, to have about double the amount of manilla on." This last is on a par with my own opinion, as the brush gets softer after using awhile. I hope to get a perfect brush for next season, as improvements are being added every few days; but those that go my mail must have the handles left out, as they can not stand the rough handling of the mail-pouches, except bunches of ½-dozen and upward. T. J. COOK.

Newpoint, Ind., June 18, 1883.

NOTES FROM THE BACHELOR APIARY.

I went into the winter just passed with 44 colonies; 10 buried, and 34 on their summer stands. All came through the winter in good condition. You know, "no upward ventilation" is my hobby, and, after practicing it three successive winters without loss, ought I not to be satisfied with the result?

DECAPITATE ALL WORTHLESS QUEENS.

The queen of every colony that does not prove to be superior workers, is removed. I think it bad management to keep a worthless queen longer than her place can be supplied with a good one. Suppose each colony in your apiary should store as much honey as you obtain from your best stock, what would your profit be?

NATURAL STARTERS FOR SECTIONS.

I think I shall never again use fdn. for sections. I find it a very easy matter to obtain all the natural starters I need; and my experience is, the bees take to the boxes much quicker where they are filled, or partly filled, with natural comb, than where they are filled with fdn. M. J. HARRIS.

Calhoun, Ill., June 15, 1883.

SOME QUESTIONS ABOUT FOUNDATION.

I sent for your special foundation-mill circular, and didn't receive any, so I want to ask a few questions, as I expect to buy one next season.

1. How much will the wax waste in making?

2. How do you manage to save the odd pieces to advantage, when a customer orders an odd size; for instance, 10x14, your size 12x18?

3. How much paraffine would you dare mix with wax for your own use, if you use wired frames?

4. How wide a sheet will a 12-inch mill roll conveniently?

5. How much could one expect to sell, if he should advertise in two or three papers, and did business on the square — 100, 500 lbs., or a ton?

I don't intend to sell paraffine foundation, but if I could mix in, say one-third for my own use, it would be quite a saving. C. J. SANFORD.

Unionville, Ct., July 10, 1883.

I do not know just what the waste is. In some specimens of wax it should be comparatively nothing, while with some others there might be 10 per cent of waste. Some very bad lots of wax would perhaps waste 25 per cent; but such we always take at a low price, trying not to pay too much for it, as a matter of course. Wax rendered from cappings with a wax-extractor ought not to waste any, unless you drop scraps on the floor and trample them in the wood.—We melt up our scraps, as a matter of course; but as it is good economy to have as little scrap as possible, we have dipping-boards of many different widths; and for special orders of an odd size, we manage to dip so as to make a certain number of sheets, with but little waste in trimming.—Your last question is a hard one to answer. One who does business on the square ought to have his business increase every year of his life; but please bear in mind, friend S., there are but very few men in this world who can be said to be strictly on the square, in spirit as well as in letter; and it also takes a little time to build up a reputation. Be patient, and take good care of every customer you get; and sooner or later you will find your reward.—I have never yet tried paraffine for wired frames, for we have been too busy; besides, I am a little afraid to try it.—A 12-inch mill will roll conveniently a 10-inch sheet of wax. Any thing much wider will be apt to trouble by running out at the sides, unless it is handled very carefully.

BEE CULTURE ON THE OLD PLAN.

I have 121 very large colonies of hybrid bees in Simplicity hives, or about the same hives, except the bottom is permanently fastened. I have never given my bees much attention, but have let them wag along, usually starting in the spring with about 80 hives which yield me some $500 the following year, besides as many more hives which I usually lose the next winter. When taking honey I just cut it out of top boxes, carry to a press which I made, and press the honey into barrels. I then boil the wax, and ship. I was tolerably well satisfied with my botch work until I picked up your A B C, as you practicaly explain things. I seem to now understand that money can be made. What I want is tools for making frames, section boxes, and comb fdn. My boxes, I think, will answer, if I can use frames, as they are the exact size of L. boxes. W. L. SHANKLE.

Omega, Madison Par., La., June 29, 1883.

Well, I declare, friend S., you are a novelty. Just imagine, boys, a man with 121 very large colonies of hybrids, getting honey out of the upper stories, and then pressing it out of the combs by means of a press! Just think of it, and then imagine the difference our friend would find after having used the best modern honey-extractors. Surely, friend S., there is a chance for you to improve some, it seems to me. No doubt you get a pretty large crop of wax, which may net you something at the present prices.

HONEY AN ANTIDOTE FOR MOSQUITO-BITES.

Several years ago I discovered that liquid honey applied to mosquito-bites cured them effectually; every subsequent trial gave same result. Being aware that most remedies produce different effects upon different individuals, I should like to have the bee-fraternity test this simple remedy upon the stings of this national foe. On my flesh, mosquito-bites swell and itch for 6 or 7 days, unless cured with honey, while bee-stings affect me scarcely at all. A. C KENDEL.

Cleveland, O., June 21, 1883.

You may be right, friend K.; but you know I am a little skeptical in regard to antidotes. It may be, however, that honey has some property for neutralizing the poison of the mosquito-bite. I presume that this season is the part of the year when many of our friends can give the matter a test without very much trouble.

WHITE-HEADED DRONES, ETC.

I find something strange. I have had some white-headed drones that I can not account for. I should be glad to hear from you about them. I took 12 queens from one stand last Saturday that was just hatching. I had a fine time with them. I made some division-boards, and put them into some of my strongest hives. I lost 4 of them.

Pisgah, Ala. F. M. DAVIDSON.

Friend D., your white-headed drones are nothing new. The matter has been reported and commented on several times in our back numbers. Not only do we occasionally find drones with white heads, but we find them with heads of a cherry-red color; again, of a bright green, and at other times yellow. I confess there is something very wonderful and mysterious to me in this matter. Why queer old dame Nature should decide to single out the heads of drones to sport with in this way will, it seems to me, be a pretty difficult matter to explain. Why should this peculiarity show itself in the drones more than in the queens and workers? Again, why should *heads* be the subject of these bright rainbow colors? Is there really any purpose or design in it? or is it just because it *happened* so? I presume there are few among our readers but will say there is a purpose and a design in it; and the next thing is to decide why it should be so. Here is a question for scientists. A queer feature in regard to this whole matter is, that we find many of these colored drones in one hive; that is, where you find one red-headed drone in a hive, you will probably find more; and a queen that produces them once will do so again. If I am not mistaken, I have seen hives where all the drones were colored in this strange way; and their heads were all alike — of one color.

INTRODUCING ITALIAN QUEENS TO LOG GUMS.

We all agree that we want the Italian queens; but as we use round gums about 2 feet long, with no conveniences to get out the old queen, we want some more advice on the subject, if it can be done; if so, how? Or can we use the Italian bee to any advantage with such gums? There are as many bees in this neighborhood as anywhere, I reckon; but they are put in gums, or boxes, when they swarm, and that is about the last attention they get.

Bentonsville, N. C. W. B. JAYNES.

Friend J., I think you will have to transfer your bees before you can use Italians to any advantage. It is true, you can drum out the swarm and hunt up the queen, and you might possibly succeed in introducing your Italian queen; but the chances are so slim of your getting her introduced without any trouble, that I think we might practically call it an impossibility. By all means get your bees into movable-comb hives. Without them a bee-keeper is, to my mind, as helpless as a woodman would be in going into a forest to get out logs without an ax or a crosscut saw.

BEES HANGING ON THE OUTSIDE OF THE HIVE.

In reading A B C this morning I came across this counsel of yours in capitals, at the head of a paragraph: "Never allow bees to hang outside the hive." It reminded me of a circumstance which may be worthy of record in GLEANINGS, and certainly would prove valuable, if confirmed by larger experience. A colony in an old box hive had been clustering for a long time on the outside. As the weather was exceedingly warm, the thought occurred to me that they lacked ventilation. The front of the hive was therefore raised ½ or ⅜ in., and they have not clustered outside since. J. A. G.

Tuscaloosa, Ala., June 28, 1883.

Thank you, friend G. I think it very likely that we often lose heavy yields of honey by giving new swarms insufficient ventilation. I have observed the same thing that you mention. I have seen bees go into hives and go to work, after doing nothing more than simply giving them plenty of air. This is one reason why I prefer the Simplicity hive with a loose bottom. You can in an instant give any colony, no matter how strong, all the ventilation they can possibly require, by moving it forward on the bottom-board; or if that will not do, raise it up as you suggest. Two years ago we had a first swarm weighing over 11 lbs. that gathered over 18 lbs. of honey in a single day from basswood-bloom. Had such a powerful colony as this been put into a hive with a small entrance, the whole body of bees would have been very likely to have clustered on the outside, idling away their time. Thus you see how 18 lbs. of honey a day may be lost, from so simple a matter as insufficient ventilation.

TO PREVENT BEES FROM ABSCONDING AFTER BEING HIVED.

When bees have selected a place to go to, before swarming, it is very difficult to retain them. I had a swarm this spring that I hived three times — giving them a frame of brood; but they continued to swarm out as often as hived, and finally got away. My remedy is to hive the bees in a Simplicity, and to use, for a bottom-board, a Simplicity flat top, over which is placed a zinc honey-plate. Saw down a place in the end of the bottom-board for entrance of bees. When the bees begin to work in earnest, take out the bottom-board, and remove the zinc plate. The idea is, the queen can not pass out through the zinc board, and is necessarily a prisoner. The worker bees can pass in and out, however, and so the work can progress. W. E. H. SEARCY.

Griffin, Ga., June 28, 1883.

Friend S., I suppose your idea is to confine the queen by means of the zinc honey-board. The Jones entrance-guard is intended for this purpose; but I presume you object to it because the holes are too few to allow the working force of a colony to get out and in without hindrance. I would suggest, as a similar way, that you tack a piece of perforated zinc on the under side of a Simplicity hive, large enough to cover one-half of the bottom. Now slide the hive forward on the bottom so far that the worker bees can go out through this perforated sheet. In this way, any size of entrance desired can be given, proportionate to the working force of the colony. All such devices, however, will, I think, prove to be only a temporary remedy; for after the bees have tried to swarm a few times, and find the queen can not go with them, they will be apt to kill her and raise another. Another point: Has it been fully proven that an average queen can not get through the Jones perforated zinc?

IS IT THE QUEEN OR THE WORKER BEES?

Does the young queen or the worker bees destroy the superfluous queen-cells? I can give you some definite points on this topic, which I see in this month's GLEANINGS. I had a stock which I knew had a large number of cells, and I opened it just in the nick of time, to find out whom to blame for the slaughter of the unhatched queens. One had hatched, and she was on a distant part of the same comb, mounted on a cell, chewing away for dear life to get at the inmate; but she had help, for three or four workers were on the same cell, doing the same thing. I held them up quite a while, and closely watched to know just what they were at; then upon examining other frames I found worker bees tearing open the cells wherever they could find them, even on combs that the one queen had most probably never yet visited. Some cells were nearly opened; others were not perceptibly touched; yet every bee seemed determined to devour them as soon as possible. Now, some writers claim that the queen does all the mischief, because they have seen her in the act, while others claim it is the workers, because they have caught them at it, while the one queen is crawling, apparently unconcerned, over the combs. Now, I am fully convinced that both the queen and workers have a hand at it, and I believe the workers tear away many cells that the queen never sees, and she helps to destroy all that she comes in contact with. But I have noticed that they are sometimes left as long as 24 hours before all are destroyed, as I have cut them out and saved them the next day after I have seen a hatched queen. No blasted hopes this season. A. A. FRADENBURG.

Port Washington, O., July 9, 1883.

I think you are right, friend F.; and the singular part of the whole performance is, that the worker bees never commence this tearing-down process until the queen is hatched. Now, is it possible that they have sense enough to say to themselves, "There, we have got a good queen hatched out, and there is not any further use for these great bungling queen-cells in the way; let us tear them all down so there won't be any jangling among the royal blood, if another should happen to hatch"? If they do not think this, what do they think, and why do they do it?

ANOTHER BEE-DISEASE.

I have noticed in GLEANINGS, pages 256 and 398, present volume, a disease of the brood, which is and has been very troublesome in this part of the world. What to call it, I don't know; but I will tell what I know about it. I bought one colony of black bees in September, 1882, and I soon discovered that there was something the matter with it. They threw out quite a lot of the young bees, such as were about to hatch, and down to the egg, and during the winter it died. In February, 1883, I bought another one from a neighbor, and I soon found that they had the same disease; so in May I transferred to a movable-frame hive, and I soon found that they would amount to nothing if allowed to go, and I did not know what to do. So in a few days I took a look at them, and found they were queenless, and the bees were weak in numbers; and I came to the conclusion that I would let them go, as I had no other bees to raise a queen from. So I ordered a 3-frame nucleus from Mr. Flanagan; and when it arrived, the brood had all hatched in my old black colony; and as soon as I could get eggs and larvæ from the nucleus I inserted it in the black, and they succeeded in raising a queen from this, which became fertilized in due time; and since then I have noticed no more throwing out of brood, and they have increased to two good strong colonies. Now, here is the question: Was this the fault of the queen being too much worn out, or was it because they were bred from the same strain of bees that this neighbor's grandfather had on the same farm 100 years ago, without changing or increasing? I think the latter is the cause, the same as it is with sheep or hogs, if kept without change too long. Now, please tell these friends to destroy all the queens in colonies thus affected, and let the brood all hatch, and then give them a queen from some other race that is not affected, and see if it won't cure the disease. It did with me, at least.

Staner's, Pa. P. D. MILLER.

I am inclined to think, friend M., that the disease you mention is something pertaining to a particular queen. I, too, have seen something quite similar, when destroying the queen and giving a new one would cure the matter entirely. I do not agree with you, however, that it was caused by in-and-in breeding, for the reason that the same rule can not apply to bees as to other farm stock. You see, the queens fly out to meet the drones from several miles distant, very often; and this peculiarity would constantly counteract the tendency you allude to.

BASSWOOD, ETC.

My bees are doing finely. The basswood is coming in bloom. We must have 100 old trees. We have 3 acres of ground where we can not plow. There are several hundred young linn-trees and sprouts. I never knew them to be so full of blossoms as they are now. Killbuck Valley is an excellent place for them to grow. I have a young queen raised from the one I got of you. She began to lay on the 8th day after leaving the cell. Have you ever known them to lay so soon? C. F. UHL.

Millersburg, O., July 16, 1883.

Yes, friend U., we have had many queens to lay in 8 days. You will see by back numbers that they are reported to lay sometimes as soon as 5 days; and, if I am not mistaken, even three days are on record. Very likely the latter has been a mistake somewhere, for it is not impossible that young queens, in flying out on their wedding trip, may change places, and an older one get into the hive than the one that went out. All young queens lay in about 9 or 10 days, as a rule; and I have had several to lay in 6 or 7 days.

SECTIONS PARTLY FILLED WHEN BASSWOOD CLOSES.

When I come too often, give me a hint. I don't know where else to go. I have several hundred pounds of honey in sections, cells nearly filled even to cap, but I guess they will leave them so on clover. Would you extract, or leave till fall bloom, goldenrod, etc., to finish? Hard to sell extracted honey here. WM. M. YOUNG.

Nevada, O., July 21, 1883.

Thank you, friend Y. I am always glad to have you come, all of you, when I can help you in any way, and I am glad to have you come when I can *not* help, only I shall feel sorry to send you away "empty handed." In regard to partly filled sections of white honey, I would by all means endeavor to get them all filled, by some hook or crook. The usual way is to feed back extracted honey; but while the bees are getting some honey from the fields, this will hardly do, for it stops outside work almost at once. A better plan is, I think, to greatly reduce the space for surplus; that is, after you take out the filled ones, close up the space with a division-board, and crowd the bees on to a few sections. In this way they will often fill them out when they would not otherwise. When they stop work entirely, then feed extracted white honey. I would endeavor to get the white honey all closed up before the dark comes in. You can easily do it by feeding back, and one or two colonies will easily fill and cap over a great many sections.

BEES AND TEMPERANCE.

I have been instructed as well as amused by the reports of the brethren; but I have seen but little from our State, and this makes me feel like saying something on the subject of our honey resources. I have been keeping bees six years. Carelessness is the cause of most all our bee mortality. We winter on summer stands, with little or no protection. I have not lost more than three per cent per annum, on an average. A few years ago I was made sorry to read of so many bees dying in the North, after so much expense. It made me better satisfied to live in the South. In 1882 I began the season with 45 colonies; increased to 85; taken 5000 lbs. honey. I sold nearly out at 12½ cts. retail, 10 wholesale, for extracted; 20 retail, 18 wholesale for pound sections. I did not fix up my bees last fall for winter, not even taking the sections, and top comes off of but few. I lost only two.

I am well pleased with GLEANINGS. Our Homes, I think, is doing much good. On temperance, in July number, it is hard to beat. I see in your State that temperance men are engaging in a hard struggle against free whisky and license. All temperance men should unite on prohibition. If we can not stay in our party and put down the great evils of alcohol, let us go out of all into a strong, united majority, and give it such a blow that it never can raise its head again. Brother Root, I will pay for and send some 60 or more copies of the *Kansas Prohibitionist* to you if you will promise to circulate them where you think they will do the most good in favor of prohibition. I will send the "big edition." It will be published July 18. I am concerned for the cause in Ohio. I do not know whom to send to; but you please let me know soon, if you can comply with my request. A. B. KIRK.

Columbus, Cherokee Co., Kan., July, 1883.

Thank you for your kind words, friend K.; but I would suggest that, instead of sending the 60 or 70 copies to me, you send them to the temperance friends who take GLEANINGS, and each one will send his name on a postal card, telling how many he can distribute. We get such quantities of printed matter here daily, that it is almost impossible to give it away, and great loads of it are sold for paper-rags, because we do not know anybody who will read it or make use of it. I sometimes think of it sadly. But in the roar and whirl of business here there are few of us who have time to read much but what we are obliged to.

PEACE IN AFFLICTION.

Died near Tullahoma, Tenn., July 10, 1883, Mary E. Good, daughter of I. R. and Anna Good, aged one year and twenty-one days. You see, Bro. R., while you have your baby with you to give you joy and comfort, we have laid ours away to sweetly sleep in Jesus until he shall come again, when little Mary shall be raised to life and immortality. There is a peace and joy in laying our children away that I had not known of before. We are comforted. Blessed is the name of the Lord. May the good Lord bless you and all yours is my prayer. I. R. GOOD.

We extend you our sympathies, friend G. I rejoice with you that you have found peace, and that balm for the afflicted that nothing but a hope in our Savior can give. Truly, "great peace have they that love thy law," even in an hour like this. May God comfort you, and may this trial be the means of drawing you nearer to him.

WHAT SHALL WE DO FOR DRONES?

The fine queen and half-pound of bees you sent me the 8th of June I stocked up good and strong with worker brood, and about ten days ago I put in a drone comb, but the queen failed to deposit eggs, and the bees filled it with honey. In a day or two I put in another, and she laid in part of it, but they are now capped over, and are worker bees. Hoping they were drones, on the 18th inst. I took from the Italian hive 4 combs, full of brood in all stages, mostly capped, with a good supply of fresh eggs, and to-day I find 10 or 12 fine queen-cells, one or two capped; but there is not a sign of a drone in this apiary of now four hives. Two blacks (new swarms, one of them), had drone brood which I destroyed, and from those four I can build up about five fair hives with as many queens; now, all the chance I see is for you to send me a lot of good drones from your best bees as soon as possible, and send me your bill. The queen is a good breeder for workers, but lays no drone eggs so far. J. B. RIDENOUR.

Woodhull, Ill., July 21, 1883.

Friend R., just go on raising your queens, and I think you will find they will all become fertilized in due time, although they may meet only black drones. I am sorry to say we have not Italian drones enough in our apiary so we could send you a lot; and, for that matter, we have no drones of any kind, except scattering ones, a few in a hive. Who can furnish friend R. a good strong nucleus of nice Italian drones?

COLOR OF IMPORTED QUEENS.

In JUVENILE for July it is stated that you have plenty of dark imported queens. If you still have them, send me one. I really care but little about the color, as some of the best imported queens I have ever had were nearly black.

West Lodi, O., July 21, 1883. JAMES BOLIN.

I am very glad, friend B., to receive such a statement from a man of your experience and ability as a honey-producer. I have long been satisfied that color has nothing to do with the amount of honey produced; but for all that, our light-colored imported queens are being constantly picked out, even when we charge a dollar or two extra for them, and yet color is only an accidental property. I am sorry to say that we are just now out of imported queens of all colors; but a lot of 50 are expected soon from Italy.

WHY FRIEND ROSS KEPT A QUEEN SO MANY MONTHS, WAITING FOR HER TO LAY. [SEE P. 398, JULY NO.]

I saw in the *Kansas Bee-Keeper*, on page 25, Feb. number, a suggestion that queens that cease breeding early in the fall, and do not begin again until late in the spring, always do most and best work during the breeding season proper. Now, according to my experience I do not believe it, as I think I gave justice to her. I fed that swarm to make it strong, and gave it brood to keep her in bees. I lost one swarm of bees trying to see what I could do in experiments. However, I learned something by her. She was not worth the postage. I lost about two swarms, and you lost the queen.

Ibaton, Kan. DAVID ROSS.

The idea you suggest may have some truth in it, friend R. I remember queens that were so late in starting to lay in spring, that I was about to destroy them; but that afterward built large colonies, and gathered a good crop of honey. It may be that a queen that has not been raising brood all winter will have greater endurance; but as attention has only recently been called to the matter, perhaps we had better wait for further facts in the case. You certainly showed a praiseworthy zeal in the cause of science; but I am afraid your queen was rather poor material to work on.

CATCHING QUEENS TO SEND OFF BY MAIL.

Did you ever try caging a queen on the comb, without handling her? I have; and with one of your Peet cages it works like a charm. Place the cage, with slide partly withdrawn, quietly over the queen and a few workers, allowing any bees that chance to be under the edges, time to escape; then with the thumb push in the slide carefully, and there she is, attendant bees and all. If there are too many, a few can easily be allowed to escape by opening the slide a little. It can be done in half a minute, with one hand, and no danger of hurting the queen either.

BURDETTE HASSETT.

Howard Center, Ia., July 4, 1883.

We have tried the plan you mention, a little, friend H., but found it slower and more trouble; besides, it seemed to stir up the bees more than to quietly pick up the queen by the wings.

FLORIDA.

I shall have to give in my testimony about bee culture in Florida. We came here last Oct., and brought 20 nuclei swarms; landed them on the bank of the St. John's River. They did well all winter; gained up fast, so they came out strong in spring. They commenced swarming, and threw out a dozen good swarms.

MOSQUITO-HAWKS.

And then the dragons, or mosquito-hawks, took them. We fought hawks, and they ate the bees until they were reduced as low as when we landed. In spite of all we could do they destroyed all of our working force, and half a dozen young queens. They soared about 6 weeks, all through the saw-palmetto, so we got no profit from that; then they left; and since that the bees have built up quite strong, so that I am in hopes of getting some returns from the cabbage-palmetto. Now, I am not quite as enthusiastic as our friend of the Garden of Eden apiary, for I find many things to pester and torment me, as well as the bees. J. A. GREEN.

Volusia, Vol. Co., Fla., July 10, 1883.

UNITING BEES.

Is there any drug which can be used in uniting small colonies? Will you also inform me how much honey it would take to winter a colony of bees hung up in the air, without any bottom-board?

Wooler, Ont., Can. W. SCOTT.

Chloroform and puff-balls have been used for uniting bees, friend S., but I think they are pretty much discarded now. Watch them carefully, follow the directions laid down, and they will *seldom* need any thing. If they begin to quarrel, a little smoke will make them unite, if they are watched and smoked occasionally when they need it.—I have never tried wintering a colony prepared in the manner you state. If all upward ventilation were closed, I shouldn't wonder if they would winter almost as well without a bottom-board; and many times I think it might be the saving of them.—As for the amount of stores for a good strong colony, I would suggest 25 lbs., although I do not think I ever knew a colony to consume that amount.

HOW FAR WILL BEES WORK TO ADVANTAGE?

I see considerable is said in GLEANINGS about the distance that bees will work profitably, some claiming that they will work several miles, and store considerable honey. My experience leads me to think that about two miles is as far as they work to make much gain in stores. My apiary has no berries of any account within 1½ miles in any direction; within 2½ miles they are quite plentiful on two sides (opposite); not enough bees to interfere any with berry-blossoms until I get 3½ miles away. When fruit-blossoms fail I always have to feed to keep up brood-rearing until clover opens; stocks from 2 to 3½ miles either side of me commence swarming and storing in boxes from berry-blossoms, while I am feeding mine to keep up brood-rearing, and are from a week to ten days ahead. In the fall I have buckwheat nearly equally on all sides for 1½ miles; from 3 to 3½ miles away are about 100 stocks with buckwheat on one side of them only. My bees average much better on buckwheat than they do, and work in that direction nearly if not quite as much as any other. Now, if bees fly so far as claimed, why so much difference in our bees working at the different seasons?

CASE OF ABSCONDING WITHOUT ALIGHTING.

June 28th a swarm came out, and part of another swarm united with it; hived in a new hive on three frames of brood, three frames of fdn., and put on boxes, July 3d. This stock swarmed, rushed out of the hive, and, without clustering, went to the woods. I chased them a third of a mile; when coming to the woods they mounted so high over the trees that I could not see them, and gave them up; came home and looked in the hive; had cells; don't think they were capped yet; there was rather more bees than are usually left.

Oh! I nearly forgot. In front of the swarm, about as high as my head, were a lot of bees revolving around, and making a shrill noise something like a swarm when they are settling. This could be heard plainly above the noise made by the other bees; but I think the other bees were quieter than usual.

I think GLEANINGS (the old ma) is all right, but—hold on until the JUVENILE is grown up, eh?

Baptisttown, N. J. JOHN B. CASE.

Friend Case, your experience in regard to the distance that bees will fly just about agrees with my own. Although I have had bees work on basswood and buckwheat as much as 2½ or 3 miles, yet it seemed to me it was pretty tough work for the little fellows.—Thank you for your fact furnished in regard to the little band of buzzing bees in advance of the regular swarm. It corroborates what friend Peters has told us in the A B C book.

NEW HONEY, ETC.

Bees are just booming the honey right in. I put in two swarms that came out and went together about the middle of June into one hive, and the fifth of July I took out 45 lbs. of honey, and left in the hive one frame of 8 boxes, which I judged had 7 lbs. of honey in it. From another two-story chaff hive that has not swarmed this season, I took out about 90 lbs. of honey; took it out yesterday. I began the season with 21 swarms; have now 36; have had 6 swarms that doubled up when swarming. There has been great mortality among queens. I have lost some 9 or 10 since spring; have drawn on my 3-dollar queen I had from you, for brood for them to raise queens from; and, by the way, the bees from that queen are the most quiet ones to handle I ever saw; no need of a smoker to handle them, though I can't get them to work in boxes worth a cent. My brown bees and hybrids are the best honey-gatherers; the blacks and brown bees cap over their honey so that it looks a great deal whiter than the Italians, Cyprians, or hybrids. But the hybrids and Cyps are tyrants to handle, but perhaps not more so than the black bees. But with smoke I can bring them to know their duty. I don't know but I shall have to give up keeping bees, soon, for I am now in a few days 77 years old, and the work is too much for me; and, by the way, we are to form a county bee association in Piscataquis County the second day of next August. LUCIAN FRENCH.

Dexter, Penobscot Co., Me.

QUEENS WRONG END UP.

Is it common to find young queens wrong end to in a cell? I have found two that way this year. I never saw it before. Perhaps that accounts for bad cells sometimes.

I had my first swarm get right up and "skip" for parts unknown this year.

SPEED OF RAILWAY TRAINS.

If you were here you could see a train run a mile a minute. I timed them the other night myself, and they made a mile in a minute good. The way of it is, there is a heavy down grade west of here, with a straight track, and the train is one of the fastest express trains on the M. C. R. R. W. H. SHIRLEY.

Glenwood, Mich., July 16, 1883.

Friend Shirley, we have had several reports recently of queens being found in the cell as you state; but I am inclined to think the explanation is usually about this: The queen hatches out in the usual way; but being frightened by the piping of other queens, or perhaps by the behavior of the bees, she crawls back into her cell again as a place of concealment. In that case you would find her in the cell, with the end of the cell open; but as the cap to the cell is often left hanging, it may be that the bees shut it to and wax it up again. I suggest the possibility of this, because I have several times found cell-caps closed back, and waxed fast, after the queen had hatched out in the regular way. I suppose that some of the young bees do it just for fun, or for mischief. Was the queen you speak of a fully formed, live queen?—I give up on the speed of railway trains.

AN APOLOGY.

I have read Bro. Heddon's remarks on my criticism of his ideas on overstocking, and I have also re-read my own criticism, and I feel that an apology is really due Bro. H. I would not for the world have intimated aught against his probity, honesty, or integrity, for I deem him truly a square man in every sense of the word. I find, however, on reading over my article, that it can be construed in a far different light from what I intended. Bro. H. has (right or wrong) been for too long a time asserting these peculiar views on overstocking, to be accused now of being wholly selfish and self-interested only in the matter. For myself, I hold still to the opinion that there is not that danger of overstocking the country that Bro. H. fears; but my reply to him was couched in language far stronger than the occasion required, and conveyed a meaning which is far from being correct. I desire to beg his pardon for the language I used in my reply; and while I might have done so in a private letter, I prefer to do it in as public a manner as my reply was made. I intended simply to indulge in a little pleasantry at the expense of Bro. H., and joke him a little on his position, and wrote as I did without stopping to think just how it would read when written. I think too much of Bro. H. as a bee-keeper and a man, and have too strong a desire to retain his good opinion, to be guilty of personally assailing him, and I trust he will accept this apology in the same spirit in which it is made, and believe me when I say I did not intend to misrepresent him, or injure his feelings. J. E. POND, JR.

Foxboro, Mass., July 7, 1883.

MRS. COTTON'S HIVE, ETC.

On page 424, JUVENILE for July, I notice part of my letter with your remarks. I hope you will correct the same in your next issue. By referring to my letter you will find that I stopped extracting on account of the loose large wheel accidentally falling on the floor and breaking in two, and not for want of a honey-knife. For this reason I wrote to you and asked your kindness in sending me another to replace the broken one, and, to my astonishment, here it came in less than one week, thereby enabling me to extract what I had to leave on account of the accident. Many thanks, friend Root, for promptness and kind-heartedness in sending it gratuitously, and paying postage out of your pocket besides. But this is just one out of the many thousand instances where you have done likewise, as shown in your much-valued journals.

This is the best honey season here for a period of ten years. I have 23 colonies, nearly all in your chaff hives, and a few which are in Lizzie Cotton's. I will sell those in Cotton hives in fall or spring, as I will not have them any longer in my yard. It is a clumsy and unhandy hive; and colonies in such fall short of Simplicity and chaff in storing honey, about 30 lbs. per hive in one season. I would by no means make or buy another such hive in future.

I shall get about 1000 lbs. of honey this season. Fred Alderfer, near here, has already that amount, and expects a good deal more from 30 colonies. He makes fdn., extractors, sections — in fact, all kinds of bee material.

A young swarm of my neighbor's increased itself to 4, but no surplus so far. Last year I got only about 6 lbs. comb. I had no extractor then. Had I had one, I might probably got extracted honey, say 25 or 30 lbs. I keep all queens clipped. About 3 days after the swarm has left the hive, I examine closely and cut out all cells save the largest. This puts a certain stop to second swarming. After the young queen is found laying, I clip, and thus have no trouble whatever in swarming. It's a certain cure for deserting, as well as for absconding in the spring of the year. Another advantage is, when 2 or more swarms issue at the same time, to prevent their clustering together. If the queens can not accompany the swarms, why, they will return to their old separate homes, where each will find their queen and an empty hive. I clip only one wing.

Hatfield, Pa., July 19, 1883. E. K. BLANCK, M. D.

Thank you, friend B., for your kind words. I certainly supposed that it was as you stated, that you stopped for want of a honey-knife. Well, either you or I made a mistake; but we have too much business even yet to stop to see who was at fault; neither do I remember sending you a wheel without charge. But when I heard of your mishap I presume I felt an anxiety to help you, just as I like to be helped when I am crowded. I am glad of your report of Mrs. Cotton's hive, because it has been suggested, as an excuse for the great prices she charges for them, that they give greater yields of honey than other kinds of hives.

Ladies' Department.

I WOULD say to "Maggie" (p. 396), I can not but think the greatest reason of bees leaving the hive is hiving them too near to where they clustered. I have kept from 30 to 70 swarms for the last eight years, and in that time have had but one swarm *leave*. My hives stand in a pear and peach orchard between two apple orchards; as they seem to prefer an apple-tree they usually cluster from two to six rods from the hives. I have my hives ready beforehand; and just where I want them to stand, I hive just as quietly and just as soon as possible. The swarm I spoke of leaving came out on a very windy day and clustered at the foot of a peach-tree. Situated as they were, I concluded the most convenient way for me would be to set the hive down by them; as I was very busy I took the old-time way, and let them stay there till night. The next morning they left for the woods, without clustering. ALICE.

North Wolcott, N. Y., July 11, 1883.

I feel as if I must speak once, and let you know my luck with my bees. Well, one died last winter; the other, a nice swarm, came out two weeks ago. They alighted about 20 feet high on a cherry-tree. I had no one to climb that height, and they hung an hour. I thought when they left I could alight them again, or could find some one that could climb; but they left. Now, I have given up having any more. I will agree with Mrs. Harrison, that it is not too hard work for women, if the bees will only be accommodating enough to alight on my little trees, so I could hive them, as I do not feel afraid of them. Last year, with a boy's help, I hived a swarm. No sooner done, than a neighbor had a swarm, and they called on me, and I went there. A peddler came along, and I asked him to saw the limb off.

From your friend and well-wisher,— ——

Westport, Conn., June 25, 1883.

May I be permitted to make a brief statement with reference to a paragraph in Mr. Hutchinson's article in July GLEANINGS? With full appreciation of the kindness of Mr. Hutchinson's intentions, I am pained that he should have thought it necessary to make in our behalf a public defense against what was only an implied — or perhaps, rather, a hypothetical — charge. The defense being made, I am compelled to say, in behalf of the truth, that Mr. Hutchinson very much misunderstood me; that I did not make the remark he attributes to me, nor did I say any thing intended to convey to him the idea that we paid our girl "five dollars a week."

I may have said that we would gladly have paid that amount for competent help, and I, probably, did say that I did not see how five dollars a week could transform poor help into good. Mr. Hutchinson, not having very clearly in mind the "advice" to which I was alluding, did not perceive the force of my reference to "five dollars a week." He must have understood me to imply that we paid that amount; and the mistaken notion, afterward, assumed in his memory the form in which it appears in GLEANINGS. CYULA LINSWIK.

Reports Encouraging.

THE DAILY YIELD.

THE following is a specimen of the yield of honey this summer: July 3d, 6 lbs. 11 oz.; 4th, 10 lbs. 7 oz.; 5th, 15 lbs. 7 oz., 6th, 9 lbs. 7 oz. The above was brought in by an ordinary colony of bees in a two-story Simplicity hive.

Moore's Hill, Ind., July 8, 1883. F. W. STEVENS.

Bees are booming; 150 lbs. of white clover per colony so far, and at least some more to follow.

Morgan, Ky., July 4, 1883. GEO. E. BOGGS.

We have 21 colonies, and all "busy as a bee." It is delightful to see them at work, and to hear their music. MRS. CARRIE L. STALLARD.

Russellville, Ind.

Bees are climbing right over me on white clover, and for the first time in my life I've been *obliged* to tier up to give them room. WALTER B. HOUSE.

Saugatuck, Mich., June 23, 1883.

Honey is coming in as I never saw it so early in the season. I extracted 76 lbs. from one hive, and did not take any from the lower story.

Bellows Falls, Vt., June 18, 1883. GUY CLARK.

The queen of the 26th ult. is fine. We named her "Sue." The bees are rolling in basswood honey. Although we live in "Linden Vale," this is the only year out of 6, that we have got any basswood honey. Let "3—513" rest as quietly as you can for a little while, till we can "let up" to sell something. "Save every drop of honey" was your "orders" for July. It takes work, "and don't you forget it."

Smithfield, O., July 15, 1883. D. H. TWEEDY.

The bees are doing nicely in this whole section of country. I have taken off a good deal of nice comb honey in section boxes. The combs are about as white as paper. The honey is as nice clover honey as I ever saw. I have had one swarm come off, and I thought that I had them all fixed so I would not have a swarm this year; "the best-laid plans of men and mice aft gang a'glee." D. C. MCLEOD.

Pana, Ill., July 4, 1883.

Bees have done well this season — far better than I anticipated, and have fully made up for last year's losses. My best colony gave me over 200 lbs. extracted, and a swarm. I shall get from 7 colonies in the spring, after selling two, about half a ton of honey, and increase to 15 colonies, which I think is doing well. I think well of the zinc queen-excluder when working for extracted honey, but not for comb; but in future I shall run for extracted wholly. My extractor works first rate; and if I had but two colonies I should want one, and it would pay well too. J. E. POND, JR.

Foxboro, Mass., July 14, 1883.

I have got work enough for two men, and only one to do it. We have not got a saloon or grog-shop in our village, but have 3 churches, 7 stores, grist-mill and sawmill, tavern, 2 planers, 2 cooper-shops, 2 blacksmith shops, one agricultural-implement shop, etc. JOHN CROWFOOT.

Bloomingdale, Mich., July 11.

Perhaps this is not the right place for your report, friend C.; but we should like to publish a similar one from every town and city in the United States.

A GOOD REPORT FROM COMMON BEES.

In the fall of 1881 I bought 30 swarms in box hives, and took on shares 70, all blacks, in all kinds of common boxes. In the winter, 20 swarms died from being queenless. In the spring of 1882 I transferred to frame hives, 80; in the fall of 1882 I increased to 170; honey extracted, 8000 lbs.; sold at 8½ cts. per lb.; wax, 200 lbs., sold at 20 cts. per lb. I wish I had got one of your mills. I worked up my wax, as I have not used any foundation.

I must have some of your Italian bees when I get out of this partnership business. JAS. BEATON.

Lompoc, Cal., May 8, 1883.

A "REPORT ENCOURAGING" IN EVERY SENSE OF THE WORD.

As I am a beginner in the bee business, I suppose you would like to hear how I am getting along. I commenced this spring with 21 colonies. I have increased to 46, and took 42 gallons of extracted honey, and 430 lbs. of comb in 1-lb. boxes. This is just the amount of honey I have taken. I took out the boxes that were full. I have several hundred that are partly filled. The prospect is, that we will reach 2000 lbs. before the season is out.

Now, friend Root, I should like to hear your opinion about how that does for a beginner. I am well aware that I have not made as big a crop as some with that amount of bees, nor did I expect to learn all about how to manage bees the first year; but one thing I have learned, and that is, I knew scarcely any thing when I commenced last spring, about how to manage the bees, and of course I see where I have missed it in a good many points.

The fdn. mill and extractor give good satisfaction; in fact, all the goods I ordered from you came in good shape, and I am well pleased with them all. People in this part of the country are getting very much excited over the success I have had with bees. They think that a barrel of honey is an awful thing; they never heard of the like before.

TOBACCO.

The prospect is now, that if I have good luck wintering, you will get to ship a good many goods to this county next spring. Now a little about my health, and tobacco. I wrote to you some time ago, telling you that I, too, had thrown the old pipe aside, and that I, with a good many others of the readers of GLEANINGS, never expect to have the filthy stuff in my mouth again. My health has been better since I laid the old pipe away than it has been for a good many years. I have had very poor health, as a general thing, ever since the war, but I feel very much encouraged since I quit using tobacco and got to working among the bees. My health is so much better, and I have gained so much in flesh this summer, that the boys say if I work another summer at the bee business I will have to run for "'Squire," but I guess it will take a little better scholar to fill that office than I am, or at least I guess you will think so when you read this letter. Please excuse my poor writing; and if you can find any thing in this worth putting in GLEANINGS, please do so. If you have a mind to send me a Clark smoker, I shall feel very thankful; but by the assistance of the good Being, I never expect to use the filthy weed again.

Grayesville, O., July 22, 1883. D. P. HUBBARD.

Friend H., your report is certainly a "report encouraging," and one of the kind I am glad to hear, especially where you touch on your experience in the breaking-away from tobacco.—In regard to your yield of honey of 100 lbs. to the colony, spring count, it ought to satisfy almost any of the veterans. I declare, it astonishes me again and again when I see how novices take hold, and, under the influence of an enthusiasm like yours, make a big success of it the very first season. It seems to me to indicate that a new order of things is coming about, and that, instead of taking seven years to learn a trade, our people now become pretty fair workmen, not in three years, nor in two years, but sometimes in even less than one year, where they go into it with a whole-souled enthusiasm such as is needed in any thing in this world. And, by the way, I can not help thinking that a man is smarter and brighter, and in every way better, after having broken in pieces the chains of a bad habit, put them decidedly under foot, and standing before God a free man. "Ye shall know the truth, and the truth shall make you free."

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

WE all have blasted hopes! Bees are doing no good—not a pound of honey have I taken. What will you sell me a barrel of extracted honey for? I am entirely out. I got my barrels and extractor ready, but have cleaned up, and set them away, with no prospects of using them this season.

Oakland, Texas, July 7, 1883. JOHN H. MULLIN.

Friend M., I have been looking for something for this department for a long while. I think you must be just the man, unless a great flood of honey has come upon you suddenly, since you wrote the above, so as to spoil your eligibility to this department.

"Forgettery,"

Or Department for those who don't Sign Their Names, etc.

YOUR letter is at hand, telling me to look over my goods once more for the rabbets, which I thought were omitted. But I am almost ashamed of myself to say that I have found them. I was just laying around those roofing tins, between which they were packed nicely. I had taken them out on a lump, and had laid them away. Excuse me for making such a mistake.

Kutztown, Pa. WM. K. DEISHER.

Notes and Queries.

PLEASE excuse my troubling you; but as you have published my communication about "Moving to Florida," page 393, July, I would like to call attention to two mistakes. I don't know if my bad writing caused them or not; but they change the meaning a little. The reading should be as follows: * * * "If a man is willing to work, let him come if he is not already comfortably fixed where he now is; but" * * * * And again, * * * "As for *health*, I think Florida will rank," * * * D. L. ALEXANDER.

Altoona, Orange Co., Fla., July 12, 1883.

I bought 6 swarms one year ago. I now have 50. But they haven't made much honey yet this season.

Amboy, Ill., July 16, 1883. GEO. PEOPLES.

BEES ON LILAC.

A. J. Cook spoke about bees working on lilac. I have one colony of hybrids, and they worked on it as long as it lasted. L. H. BARTRAM.

New Lenox, Mass., July 18, 1883.

WHITE POLLEN.

Answer to question in last JUVENILE, "Where do bees get white pollen?" Ours are getting a nearly snow-white pollen from plantain, at present. Bees are booming with us this season. J. F. SCHAFER.

Ada, Hardin Co., O., July 21, 1883.

SUNDAY SWARMING.

If your bees happen to swarm on Sunday, do you hive them, or let them hang till Monday?

Watson, Ill. JOHN CLINE.

[Hive them, *by all means*, friend C. Doesn't the Bible plainly direct you to do so?]

HONEY VINEGAR.

Mrs. Harrison is just right. It may do for week days and children, but will not answer for Sundays. We have used it for more than 20 years. I have seen many swarms depart without alighting.

La Porte City, Ia. JESSE OREN.

Please say to Old Fogy, that I had a first swarm leave a box hive, and go off without clustering—May 18, 1882. I can vouch for its being a natural swarm, the bees having been at work in boxes for 10 days before the swarm issued. R. R. CUYLER.

Rapidan Station, Va.

DO BEES EVER SWARM WHEN IT IS CLOUDY?

I hear some say they do not, and I want to be certain whether they do or not.

Seneca, Kan., July, 1883. MALINDA A. WILKINS.

[I believe bees usually prefer to swarm during warm sunshiny weather; but when they get a going in real earnest they pay very little attention to whether it is cloudy or not. Sometimes they swarm even during a light rain. See reports elsewhere.]

BEES IN THE WOODS.

There are lots of bees in the woods here; and if I had the opera-glass I could do much better. I went to the woods to-day and found a fine swarm just leaving a tree I had found, and I let them settle on a tall tree; so I got my hive, saw, etc., went up the tree, sawed the limb off, brought it down, and put them in my hive, so to-night I have a fine swarm. How is that for a new hand? R. M. BOYD.

O'Fallon, Mo.

HORSEMINT, AFTER ALL.

We are just through a rather protracted drought; but now the rain has come, and the Texas horsemint is booming, and the bees are happy, and so are we. But last night some vagrant thief stole a hive of bees, and strewed the honey along on the prairie. That's what I call low-down stealing.

Mexia, Tex., June 12, 1883. E. K. SWINBURN.

A LESSON TO BE LEARNED.

Clover is slacking up a little, and basswood is just opening; but as trees are so very scarce here, no crop of basswood honey will be gathered. I still learn the old lesson over; that is, to be always ready. By being behind I have lost part of the clover crop, but got back some in increase of colonies by natural swarming. T. J. COOK.

Newpoint, Ind., June 25, 1883.

A SUCCESSFUL HOUSE APIARY.

Some time when I have more leisure I will send you a drawing and description of my new house apiary, and how I succeed with it. It is 42 ft. long, and I have 35 swarms in it at present; have room for 5 more. Bees have been doing well so far; and if we should have as favorable a fall for honey as it was last year, you will receive some large reports to record. F. E. PRICE.

Nokomis, Ill.

IMPORTING QUEENS.

A party of us, subscribers of yours, want information concerning Chas. Bianconcini, of Bologna, Italy. 1. Is he a square man? [Yes, sir.] 2. Does he deliver queens free of postage or expressage? [No, sir.] 3. What number of queens are liable to die in transit? [Perhaps a half, on an average.] 4. How long, probably, will it take to get them, after sending? [60 days.] 5. In case expressage is charged, what will it be on 8 queens? [From $10 to $15, and sometimes $20.00.] EDWARD BURR.

Rockport, Ind., June 8, 1883.

The "Smilery."

I AM all smiles, gathering in so much honey, and my wife even "grins" too when she sees the sweet stuff dripping from porch to porch, as I have no honey-house; but I will by this time next year, I daily promise her. I think I learn enough from GLEANINGS to pay its way; and your goods, so far as I have used, are a success. For several years my wife has said she would rather have honey-bees than Italian bees; but now she rejoices that she has them "combined." I will write you more about my bees soon, if I am not drowned in this flood of honey. D. F. WEST.

Hiseville, Barren Co., Ky., July, 1883.

I am glad to hear of the great flood of honey, friend W.; but may I not say just a word about the dripping on the porch, which you suggest? Although you do not say so, one might rather infer that you expect to have the dripping on the floor of the honey-house when you get one. Now, if I were you I would not have any dripping anywhere. It is true, it can be washed up; but as the honey soaks into the wood, it is a pretty hard matter to prevent it from leaving a peculiar stickiness; and by and by a peculiar rank smell is perceived — especially when the house has been closed up some little time. I know it takes time, to avoid getting honey on the floor; but I know many bee-men think it is cheaper to let it drip, and when they get around to it have a "good old scrubbing-up." There *may be* economy in such a course; but I do not quite agree to it. I have had a good deal of experience in caring for rooms, and the manufacture of many kinds of goods, as you may know; but the older I grow, the more I am impressed with the idea that true economy lies in the line of keeping things clean and in order as you go along. May be this little lecture is somewhat out of place right here; but you suggested the idea, and so I "got to going," you see. Now, then, boys and girls, when you get your new honey-houses made and ready for use, beware of how you let stickiness and sticky habits get in upon you.

Bee Entomology,

Or Enemies of Bees Among Insect Tribes.

"QUEENS THAT ARE NOT QUEENS."

IN regard to this subject, mentioned on page 395 of our last number, Prof. Cook writes as follows:

> They are all real genuine queens. They have no pollen-baskets, have a short tongue, toothed jaws, and curved sting. They are so dried up that I can not study the ovaries and spermathecas so as to determine satisfactorily whether they are virgins, or impregnated. They look small, and so appear like unmated queens. But queens long idle, like those just imported, are often small — as small as these. I received an imported queen a few days since, for my brother, so small that she might easily be mistaken by the inexperienced for a worker. These are certainly real queens, either virgins, or queens some time inactive, I should think. A. J. COOK.
>
> Lansing, Mich., June 23, 1883.

Friend Cook, I am glad you have touched on that point, that queens lying idle have much the appearance of unfertilized queens; and I hope the friends who have been so uncharitable and so unkind as to say that the queens they had received had so much the appearance of virgin queens that they did not believe they had ever laid an egg at all, will ponder well on the matter. Such words can not very well avoid wounding keenly any conscientious bee-keeper who may send out queens. Remember, friends, that writing back to a man who sells you a queen, that you do not believe she ever laid an egg at all, is equivalent to telling him that you believe he is dishonest. So much does a queen lying idle become like an unfertile queen, that I have hazarded the conjecture, that such queens sometimes fly out, and are fertilized again. I am led to this belief by having pretty positive proof that young laying queens sent from Italy have several times flown out and met the drones on their arrival here; and I am about as sure that friend Bianconcini sent me none but laying queens as if I had caged them and sent them all myself.

Our Homes.

Blessed are they which do hunger and thirst after righteousness: for they shall be filled.—MATT. 5: 6.

A FEW days ago I was passing along the street, on my way to our young people's prayer-meeting. Many trials had come during the day, and I had not met them all as I felt that a follower of Christ should have done. Some things had been neglected and some forgotten that it seemed to me I had no business to forget or neglect. All together, I had a rather sad sort of feeling that I was not doing very much for the Master in any way. As I reviewed events, and my busy, tangled-up life, as it seemed to be, I was wondering if there were any good thing about me at all. I began searching, in my thoughts, of course, for some comforting Scripture texts — some places of solid rock on which I could fix my feet. Do you remember in the Pilgrim's Progress where Evangelist told Christian there are steps made through the Slough of Despond? And we are told afterward that these steps are God's promises. Christian and his companion Pliable blundered into this slough, and got daubed with mud, because they did not look for the steps; and these steps are Scripture texts — not only for our comfort, but for our safety in treading the straight and narrow path.

Well, that evening I was somewhat in the Slough of Despond, and I felt instinctively that the trouble was, I had neglected the steps. I tried several, but they did not seem to give much comfort or satisfaction until I struck on the one at the head of our talk today —"Blessed are they which do hunger and thirst after righteousness: for they shall be filled." That answered it surely. I do hunger and thirst after righteousness, God knows; and that, too, every hour of my life. Whatever sins may lie at my feet, I do not know that I can remember a time when I did not love righteousness; when the sight of it did not give me real, true, honest pleasure — the most abiding pleasure, in fact, that this world gives. Hungering and thirsting after righteousness! who but our Savior could have thought to put so much in a few words? There are many things we want in this world; but who is there who wants it in such real truth as one who hungers and thirsts? Sometimes people do not seem to see the sad need of righteousness in their own hearts, but they almost always see the need of it in others. Even when humanity is at its lowest ebb, it looks out upon the world lamenting the sad need of righteousness.

What is righteousness, friends? Is it God's law? Do you remember what David says in that first Psalm about those whose delight is in the "law of the Lord," and those who meditate on it both day and night? And then, again, away over in that long Psalm, do you remember that little verse, "Great peace have they which love thy law"? Well, friends, I want to tell you a little incident to illustrate some of my trials while hungering and thirsting after righteousness, and to illustrate, also, a fulfillment of the little text before us to-day.

Perhaps a half a year ago a man came to me, asking for employment. I told him I had nothing on hand then, but would consider the matter, and see what I could do for him, or something to that effect. Not long afterward I saw him with a great long pipe in his mouth; and feeling that, if I should employ him, it would only bring up a discussion on that old tobacco question, I mentally concluded it would be best, perhaps, not to engage him. I tell you, friends, I do have trials and discouragements in giving places to those who are strongly addicted to tobacco. Of course, they promise to give it up; but the temptation too often overpowers their sense of honor, and then I am accused of using my facilities for giving employment to so many, just to make hypocrites of them, or to induce them to tell falsehoods. Finally this same friend came to me and demanded why I had engaged others, and had found no work for him. I told him it was his pipe and tobacco that discouraged me; and I told him, too, that I feared he would not like to give it up just for the sake of having work; therefore I had not given him employment. His reply was, that he expected to conform to the rules of our establishment, and not use any tobacco around the factory, or during working hours. Of course, I explained to him that this was not the rule of our establishment, and that I did not hire people with that understanding. He argued, as so many others do, that he expected to do as well as the rest did, and that part of my boys used tobacco habitually when off from my premises. A discussion followed in regard to my right to dictate to my hands what they should do outside of working hours. I asked him if he would not concede to me the privilege of employing whom I chose. While he assented to this, he criticised my way of doing things pretty severely, perhaps, and I so far forgot one other of my favorite stepping-stones as to talk back a little harshly. Do you want to know what this other stepping-stone is, dear reader? It is, "Not by might nor by power, but by my Spirit."

After he went away, conscience began telling me that the conversation had closed with something else uppermost than "my Spirit" — than the Spirit of my Lord and Master. I felt uneasy, and went back to where I left him, but he was gone. I made inquiry for him; and a good brother, overhearing me, told him next day that I wanted to see him. I did not quite mean to have him do this; but next day he came down, quite a little piece from here, and said he was told I wanted to see him. What should I say now? I told him I felt sorry that the spirit I had shown toward him had not been a better one; and we pleasantly began again the discussion of tobacco. He said that he had used it all his life, and it would be a hard matter indeed for him to give it up entirely. During the conversation I asked him, while thinking of this struggle with a strong appetite, if he had ever been a professor of religion. He replied very quietly, and I thought, rather sadly, that he was once a member of a Christian Church.

"And why, Mr. S.," said I, "are you not still a professing Christian?"

It was some little time before he replied. Then he said something about having lost all his property, and he got into a complaining spirit, and with his property went his religion. After that he went home, and I saw no more of him for several days. When he came to me again he consented to give up tobacco entirely, and said, in fact, that he had not used any for several days; and, of course, he went to work. I hope this friend will pardon me for saying here that others besides myself had been somewhat prejudiced against him. I gave him work in the saw-room, but it was not very long before Mr. Gray informed me that the foreman of the saw-room declared that, if this man was going to work there, he was *not*. I felt badly to hear this, on two accounts: First, I did not know what to do with our new friend, because I new it must hurt his feelings if I told what had happened. I also felt sad to know that the foreman of the saw-room should speak in that way; for he has a remarkably mild and gentle way, and I had never known him to make such a speech before in all my acquaintance with him. I turned away slowly and sadly. All I could do was to breathe the oft-repeated words, "God help me to do what is wisest and best for all parties." And then, as has happened so many times before, a place was opened for him in another room, where he is still at work. I met the foreman of the saw-room several times during the day, but I made no allusion to the incident of the morning, for the very good reason that I had not settled in my own mind what I had best do. Perheps the very best thing in the world to do was to say nothing; for it transpired not very long afterward, that he came to me with his usual frank, pleasant look, and told me that he wanted to apologize for what he had said, and to assure me that he would do all in his power to help any one in the work, whom I might think proper to send into his department. He also added that he did not mean to forget himself so far as to speak as he did that morning. Do you see how it works, friends? "Not by might nor by power, but by my Spirit." To my great comfort and joy, pretty soon it began to be talked about, that, instead of friend S. being hard to get along with, he was remarkably pleasant to all, and unusually handy in any work he picked up, even though the work seemed new to him. When we had texts at the noon service, my heart was rejoiced to hear his voice among the rest, and to feel that his texts were generally well and wisely chosen.

Last Thursday evening I started for prayer-meeting again. Many cares pressed, and I was a little late; and to tell the truth, friends, so many things were on hand that needed attention, I felt a little as though I would rather not go. May God forgive me for giving way to such a feeling. When on the way to church, a good sister met me and pleasantly inquired if I was going to prayer-meeting. I told her I was, and was going to ask her if she hadn't better turn around and go with us.

"Mr. Root, I have been reckoning on this prayer-meeting all the week, and I have been thinking much of going; and, in fact, I had got almost to the church when I felt that my health demanded that I should turn and go back home. It was a cross to bear, but I guess it is best. I will pray for you; in fact, I have been praying, and I think you will have a blessing to-night. Yes, I am sure you will."

I was a little surprised to see her so positive; and even with all my faith, if you will excuse the expression, I began wondering if it was not a little bit of a notion she had got. Satan had not quite let go of me, you see, and uncharitableness was lurking in my heart.

I think I shall make a little further confession here to-day. May be it will keep me from such sins if I do. Have you not noticed, dear friends, the tendency in me to think folks need not be sick quite as much as they are? My health is remarkably good, and I presume my powers of endurance are more than usual; and yet, instead of being thankful for this, and having a loving sympathy and charity for all those in ill health, I let this ungenerous, unchristianlike feeling come in. And I was wondering whether it were not a little bit of a notion she had that she could not go into the meeting and sit down, when she was almost there. If her eyes ever meet these words, I want to ask her to forgive me; and I hope God will forgive me too. The meeting passed off as our meetings usually do. When I got warmed up by the hymns and texts and experiences of others, I felt ashamed of my ungenerous thoughts, and began wondering if that blessing she spoke of were really to be ours. The meeting was so nearly out I had decided she was mistaken, when I noticed friend S., who was present at the meeting, look as though he was considerably agitated. To my great surprise and joy he rose up. I can not remember his words, but they were something to this effect:

"Friends," said he, "a few days ago a man asked me if I had ever been a professor of religion. I have been several years a resident of your State of Ohio; but I can not remember that any one has ever before spoken to me on the subject of religion. I was obliged to confess that I had once been a professor. The next question was a much harder one to answer: 'And why, then, friend S., are you not one now?' I finally attempted an excuse; but the utter flimsiness of that excuse troubled me still more. after thinking the matter over, I went home and took up my Bible. The first thing I opened to was another reproof; and, friends, I had no peace till I resolved to come back to my Savior."

I am quite sure that I have not used his exact words in the above, but it gives the leading thought, any way. He quoted a good text which he found on opening his Bible, but I can not recall it now. A breathless stillness pervaded the room while he spoke, and as he sat down, nearly overcome with emotion, I am sure an inward prayer went up from many and many a heart for God's blessing for him who had spoken. A blessing had indeed come to our meeting, and a general hand-shaking took place after the meeting had closed. Our sister's prayers were answered. "Blessed are they which do hunger and thirst after righteousness: for they shall be filled." We had been hungering and thirsting, and the promise had come.

Now, friends, do not make a mistake here. Of course, I can not say positively that this man will renounce his unbelief, and be a consistent Christian from now on; but I think he will. If he holds on to that strong Arm, there will be no trouble, for one of our best stepping-stones is God's promise—"Him that cometh unto me, I will in no wise cast out."

I wish to call attention to two points brought out in this experience: First, the backwardness of professing Christians to talk with others on the subject of religion. Our friend said that, during the four or five years he had been a resident of the State of Ohio, he could not remember that any one before had talked with him in regard to the salvation of his soul; in all this time, no one had asked him the simple little question, "Are you a Christian?" Perhaps I should not have done so, if the thought had not come into my mind that, if he only had faith to ask God's help, the matter of breaking off from tobacco would be easy. I asked him, a little time ago, how he got along with tobacco. He looked up with a bright, honest look, and, dear friends, it was a pleasant, happy smile, too, as he replied, "Why, I do not have any trouble with it at all." One other morning he quietly remarked as he passed me, "Mr. Root, I dreamed of smoking my pipe last night."

"Did you? well, how did it seem?"

"Why, I dreamed it made me sick," said he, with a good-natured laugh. There you have it friends; when God's love fills the heart, these old appetites are crowded out, and are easily conquered. "And the truth shall make you free."

Now my other point: He laid considerable emphasis on the point of his feeling rebuked at the utter flimsiness of any excuse he *could* offer in answering the question, "Then why are you not a Christian now?" Is there any one whose eyes are resting on these pages who has been a professor of religion, and who knows the comforts of a faith in Christ? If so, I ask you, dear friend, to answer in your own heart, why are you not a professor of religion still? Can any excuse be offered that is not a flimsy one? Is there any reason to be found in the whole universe for ceasing to stand up for Christ and righteousness after you have once thus stood up? Who hungered and thirsted after righteousness, more than any one that ever lived? Who is it that, even in his childhood, showed such a depth of longing and craving to see righteousness in the hearts of men? Who but our Lord and Savior, our Master and Redeemer, was it that gave his whole life toward reproving sin and wrong and deceit, and to holding up righteousness? If you take the gospels, and study the life of Christ, how quickly will you see where his whole heart and soul lay! "Blessed are the pure in heart," said he to the multitude, and then gave them a promise, "for they shall see God." Suppose, dear friends, you should put it this way: "I once hungered and thirsted after righteousness; but I do not any more; I gave it all up because something happened." How would that sound? Or suppose you say, "I once tried daily to be pure in heart, but I gave it up after a while. It was all foolishness and imagination." What do you think of such reasoning?

Why, it is awful; to be sure, it is. Now, to be a Christian is to be a follower of Christ. To be a Christian is to hunger and thirst after righteousness. Perhaps the greatest number of excuses is the inconsistencies of Christians. Suppose you give, as a reason for not caring any more for righteousness, or for not striving any more for being pure in heart, that nobody else does. If all the world should give up righteousness and purity of heart, and turn to wickedness, would there be any comfort in *your* doing so?

We all feel our unworthiness. Every one who stands up in meeting for the cause of Christ feels, as he never felt before, his inconsistency, for his life falls so far short of what it should be. It is well that it is so. There is nothing in this world that I know of that keeps a man in the straight and narrow path, like confessing Christ before the world, or like saying publicly, "I am hungering and thirsting after righteousness." The success of the Tobacco Column, that is doing so much good, is owing to the fact that each one who promises to give it up makes a public promise before the world. His wife and children read, what he has put down in his own handwriting. It was well that he wrote to me when he promised to use no more tobacco. His wife and children read it, his friends and neighbors read it; they say, "There, Jim has promised not to smoke any more. It is right down in print. If people see him, they will talk about it, and they will all report him." The truth is, friends, he dare not smoke. If he has more respect for the eyes of the world than he has for his own sense of honor, he might go off in the woods and smoke; but God would see him there. He knows it, and he believes in God. All men do. Now, mind you, I am not holding up tobacco as a great sin. That is not what we are discussing. It is breaking one's promise that is the great sin. You can not say that he is in bondage, because he voluntarily made the promise; he proposed to give up tobacco of his own accord; and perhaps he knew, poor fellow, that it would help him carry it out, if once that promise were in public print; and may be the sight of that innocent little smoker would be a help, too, when the battle was a hard one. May God help you all, my friends.

Now, then, let us drop tobacco. One who stands up in prayer-meeting, as did our friend, and asks the prayers of Christian people, has publicly avowed himself on the cause of right. They all heard him speak of his new resolution; they heard him say, too, that he was hungering and thirsting after righteousness. Those who attended the meeting talk it over as they go home. Very soon everybody knows that "Jim," or whatever else his name may be, got up in meeting last night, and said he wanted to be a Christian. Who is there whose heart is not moved by such an event? And when a great strong man stands up before his friends, and, in a broken voice, and with tears in his eyes, announces his determination of following the Savior, who is there that can stand by and not rejoice? Why, the Bible says there is even "joy in heaven over one sinner that repenteth." Now, friends, do you wonder that I always find comfort in these words, "Blessed are they which do hunger and thirst after righteousness"? Do I hunger and thirst after righteousness? God knows I do. I rejoice and feel happy when any human being, no matter what his name, age, or station, takes up the cross of Christ; and I feel sadness and sorrow when any one goes in the opposite way. Do we not all love righteousness? and can we not all join this bright July morning in hungering and thirsting after righteousness? And still more, dear friends, that it may not be all talk and no deeds, can we not rise up together as a band of followers of Jesus the Son of God, who are unitedly hungering and thirsting? And may we not be afraid to stand up before the world and proclaim where we stand. May God in his great mercy and loving kindness look down upon us all, and help us!

Tobacco Column.

As I am indebted to **Gleanings** for the benefit derived from breaking off the bad habit of smoking tobacco, after using it for the past 20 years, I feel it my duty to let you know of it; not only for your encouragement, but also for those who are trying to overcome a bad habit that has almost overcome them. Now, I don't want you to send me a smoker, for I consider I am well cured of smoking, as I have not smoked this year; and besides, I am well provided with smokers.

Nokomis, Ill. **F. E. Price.**

The smoker you sent me has come. I am obliged. If I ever resort to the "weed" again, I'll *sorrowfully* send you price of the smoker. **G. H. Lamb.**

Wilmington, N. C.

I think I will lay claim to one of your smokers. I have used no tobacco in any form for one year, and it has been a hard struggle to break up the habit, and the want of it at times; but I have been true to my word, no tobacco for me. **Oliver B. Parish.**

West Worthington, Mass., July 5, 1883.

I have been cultivating the habit of smoking for 4 or 5 years. I have come to the wise conclusion that it doesn't add to my beauty, wealth, or fame, and have this day laid aside the filthy weed for ever. I don't need a smoker, friend Root, for we have lots of them. **William H. Bright.**

Mazeppa, Minn.

And may God bless and strengthen you in your wise resolve, my good friend, and may the influence of your example go *far* and *wide*.

ANOTHER CONVERT.

In perusing your journal I find one column devoted to the interest of tobacco-users. I have been a slave to the weed long enough, and have laid it on the shelf, and told it I would be master the rest of the time. Now send your smoker; and if ever I resume my tobacco I will send you 4 times your price. I will send my forfeit, doctor or no doctor.

J. A. Green.

Volusia, Vol. Co., Fla., July 10, 1883.

ANOTHER TESTIMONY.

I have been a dear lover of cigars — I quit about three months ago; thought I would take a smoker, as a seal of the covenant. If I go back I will pay you double price for it. I thought and was taught that, to smoke a pipe or cigar when handling bees was the right thing. Please allow me to say (as one who has tried it), that there never was a more mistaken idea about the business. I am glad you are doing so noble a work in this cause. Hope all beemen (we'll not mention women) will fall into ranks with us. **J. H. Mullin.**

Oakland, Colorado Co., Texas, July 7, 1883.

I see by **Gleanings** you are giving a smoker to every one who stops using tobacco. I stopped smoking Sept. 27, 1882, and if you have not withdrawn your offer, please send me a smoker.

Smithville, Jeff. Co., N. Y. **M. S. Lord.**

Very good, friend L.; but I do not see anywhere in your letter where you promise not to use tobacco any more. Here in our factory I have, I think, a very good idea of how hard it is to get a fair and square promise from our boys. If I do not do so, some time when I find them using it they will say they did not promise not to use it. Not a great while ago a young man told me he did not promise; but when questioned closely he said I only asked him if he used tobacco, and he said he didn't. "Well," said I, "and is not that a promise?" "Why no," said he, "not exactly, for I commenced using it after we had that talk." And this all occurred while he was working for me. Now, friend L., we want to hear you say before all these friends, that if you use tobacco any more you will pay me for the smoker.

JUST FOR SPITE.

I ordered goods of you June 5th, which I received all right in due time; but **Gleanings**, which I expected to receive right away, if not sooner, has not made its appearance yet. Now, I am real mad about it. I have been reading and re-reading **Gleanings** of the three years past, and want something new and fresh. Now, by way of spite I will just say, and that truthfully, too, which I can prove to your satisfaction, that about two months ago I quit the weed, both smoking and chewing. Now, according to your own bargain I am entitled to a smoker, and it ought to be a good large one too; for I have used the weed some 18 years, beginning when about 12 years old. Now to the point: I have a Clark smoker, but it is somewhat "out of breath," and a squeaker too; so just send it right along — a good large one that will hold half a day's rations to work with bees in spring and fall. Tell me what the smoker is worth when you send it, and do not forget **Gleanings**. **Amos Lochbaum.**

Chambersburg, Pa., July 10, 1883.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, AUG. 1, 1883.

I have set before you life and death.—DEUT. 30: 19.

WE have to-day, July 30, 6031 subscribers; and this would warrant us in raising our price for advertising to 30 cts. per line; instead of doing so, however, we shall continue at the same old price, 20 cts. per line. But advertisements can be inserted in the JUVENILE hereafter at the uniform price as above.

I AM notified that a paragraph has appeared in one of the French bee-journals, reflecting on the character of our good friend Dadant; and the worst part of it is, they have tried to attach my name to it. I hope it is a mistake in translation, and not any willful attempt; for of one thing I am certain — I have never written any thing against the business character of the Dadants, either home or abroad.

ALTHOUGH all hands in our factory are pretty busy, we can send most goods by return express or freight. We have clerks prepared to give especial attention to telegrams. In fact, we have sent more goods in answer to telegrams this season than in all previous seasons together. It is somewhat expensive, it is true; but there is some satisfaction in knowing that, by taking this extra expense, you can have what you want in 24 or 48 hours.

SELLING BEES TO MORE NORTHERN FRIENDS AFTER THE BASSWOOD FLOW.

ABOUT the middle of July, R. Stehle, of Marietta, O., sold us 40 lbs. of bees at 50 cts. per lb. He sold them thus low because the basswood yield was over in his locality. They reached us just in its height, and in two days after they were let out they gathered enough to pay for themselves, and a little more. Now, is here not an opening for an important branch of our industry? The bees went to work like new swarms, and worked thus for nearly ten days, at the expiration of which time we might easily have sent them to some friend in Michigan, and have the same thing repeated until we reached the limit of the basswood region. What is to hinder, friends? and why not start the thing going? As they were shipped in the light cages, the express charge was not heavy, and I presume one or two hundred miles' distance would be sufficient for each shipment. I will tell you more about it in our next issue.

A BRISK trade in queens is going on this year. We are sending out from 30 to 40 daily, and the supply just about equals the demand. Some write us, evidently thinking that we claim our queens to be extra. This is not so, friends. Our dollar queens are most of them purchased of good reliable men. But they have no *particular* recommendation, unless it is that they are raised from freshly imported stock. I am sorry to say that we are out of imported queens, although we have an order in Italy now for over 100. A shipment is expected daily. We can usually send black and hybrid queens by return mail; but as we do not raise these, there is no guarantee on them whatever. Our select tested queens are all raised in our own apiary, or that of Neighbor H.; and we endeavor to have them all that we claim in our price list. I am sorry to say, that the demand is at present rather beyond the supply. With the exception of these and imported queens, we are prepared to fill all orders for bees or queens by return mail or express, with but few exceptions.

OUR COLD-BLAST SMOKER.

YEARS ago I had a hobby of having a smoker that would work nicely while the door to take in fuel was all the time open and ready to replenish. I finally abandoned it as something to be desired, but hardly to be secured. A few days ago I saw one of the girls in the apiary using one of our smokers in just that way. Her rotten wood was a little long, and she was not strong enough to break it up readily, so she just pushed in long pieces, as many a good housewife has done on baking-day when the wood was too long. But in this case it did not seem to work badly at all, for no smoke came out of the door while the smoker was being used. As the fuel burned down, the long chunks were simply pressed down a little, and it seemed to work quite handy. One or two have complained because the doors to our smokers did not fit very closely. Why, friends, they do not need to fit closely. If you keep the soot scraped out according to directions, your smoker would do very well without any door at all. Keep the air-passages free, in any case. Perhaps I might tell you that we have, since July 26, 1882, up to the present date, sold a little over 10,000 of our smokers, and still they are going at the rate of nearly a hundred a day.

OUR OWN MAKE OF FOUNDATION-MILLS.

VERY much to my surprise, I was informed by our machinists that we had made and sold, since Jan. 1, 1883, *one hundred and forty-eight* of our fdn.-mills. They have gone to all parts of the world; and although a few have complained because their rolls looked rough when they first received them, I think none have complained after giving a sheet of the fdn. to a hive of bees, and many are the kind words received in regard to them. Here is one from George Neighbour & Sons, London, Eng., who have recently had two of our mills:

> We like your foundation-mills very much.
> London, Eng., July 13, 1883. GEO. NEIGHBOUR & SONS.

Now, you may think it a little singular when I tell you that the fdn. we have been making this season has not, until recently, been made on mills of our make. From the time the first mill was turned out until about the first of July, orders were so imperative that a mill could not be spared to go into our wax-room. Since we have got these new mills, however, we find we can make six or eight Langstroth sheets to the pound without any great difficulty. It is owing somewhat to the shape of the cell, and perhaps more to the superior hardness of the metal used in our mills. We are now prepared to ship, by first train, any mill of either size.

TWO QUEENS IN A HIVE.

A FEW days ago our apiarist went to a chaff hive where he expected to find a select tested queen. To his surprise, she had somehow turned to a very indifferent one. A few days afterward he called on her again, and found her fully up to the standard, as on his first inspection. This attracted his attention, and investigation showed two entire colonies occupying one hive and one common entrance. One was in the upper story on one side, and the other was in the lower story on the other side. Very likely this state of affairs would not have worked after the basswood season had closed.

A WORD TO THOSE WHO WRITE MATTER FOR GLEANINGS.

Dear friends, although I would not for any thing have you cease giving us facts from experience because you have not the faculty for putting them in nice shape ready for print, I would suggest that you take a little more pains with matter intended for publication. It is true we can sift out what we consider to be valuable, and cross out the rest; but those who have tried this know that it is a very laborious process ,and oftentimes unsatisfactory to either parties when done. Can you not, when communicating facts, separate them from each other by "small-cap" headings, such as you see we use throughout our articles and Heads of Grain? Keep business and personal matters on a different sheet from that which you intend for print. Bear in mind that space is valuable, and we want in nothing but that gives real value to our readers. Of course, we want pleasantry and good nature; for cheerfulness is as helpful as dollars and cents. But please bear in mind that we want to hear from as many as possible, and therefore we can not permit any single individual to cover any great amount of space unless he has something important to communicate. Let us have valuable hints, brief and to the point, from a great number each month. Will not that be the best way?

FRIEND FLANAGAN'S VISIT TO THE SOUTH.

C. O. PERRINE'S FLOATING APIARY — REMNANTS OF IT.

On Feb. 1, 1883, I started on a trip south. When I left Belleville the thermometer was nearly at zero. When I reached friend McKenzie's, near New Orleans, 3 days later, it was 80° in the shade; bees were flying, and gathering honey from an early variety of willow. I saw and gathered many varieties of roses, blooming in the open air, and white clover and the dewberry (a species or variety of blackberry) was in bloom also. I saw no bees on any thing but the willow, which in all the lower Mississippi is very abundant. There are three or four varieties of willow following each other in their order of blooming, making or prolonging the honey-yield some 6 or 8 weeks. The white clover, much to my surprise, was very abundant. I learn that, though it blooms as early as the first of February, it seldom yields honey before May, and even then not with certainty. After the willow, maple, and white clover cease, there is but little honey gathered till in the fall; then the wild vines, among them the black-jack, the cow-itch, and others, always yield well; and the goldenrod, where abundant, can be depended on for an abundant yield. I found that very little comb honey is raised, as there seems to be no demand for it, even at as low a price as extracted honey brings; and besides, from some cause it is found to be very difficult to keep it in a marketable condition during the hot summer weather.

In company with friend McKenzie, near Carrollton, I visited several apiaries, among them that of E. Stahl, of Kenner, who had as fine an apiary, consisting of nearly 200 colonies in L. hives, as one would care to see in point of strength of bees and arrangement of hives, etc. I found him eager and willing to adopt all modern improvements, and he intends to Italianize his stock, and thus improve his bees.

I also visited a remnant of C. O. Perrine's famous floating apiary. It is situated some distance above the city of New Orleans, in the midst of a willow and cypress swamp; and from the report of the man in charge (friend Perrine is generally either in California or Chicago), I learn they get considerable quantities of extracted honey, both in the spring, from the willow, and in the fall, from the goldenrod and other fall flowers. If proximity to pasturage is an advantage, they certainly should do well there, as it extends from the very hives, for miles in all direction. This apiary contains about 175 colonies in L. hives, principally blacks and hybrids.

FRIEND VIALLON'S APIARY AND BEE-HIVE FACTORY.

From Perrine's apiary we went to Bayou Goula, the home of friend Viallon, one of the most extensive, progressive, and enterprising apiarists of the South. We found the factory in full blast under the management of friends Olin, father and son, who, I understand, learned and graduated in bee-keeping under friend Root, of Medina, Ohio. We received a most cordial welcome, and every attention one could desire, and discused all points of progressive bee culture; and though friend V. does not entirely indorse the views of some of our leading apiarists in regard to *Apis Americana*, or the coming bee, he certainly raises and sends out bees and queens second to none. He has some 400 or 500 colonies in splendid condition, and a large number of nucleus hives, with fine tested queens. We shall not soon forget the pleasant and profitable hours we spent with friend V., who, by the way, has had a view of his apiary taken, which I ask you to give us an engraving of in Gleanings; but let the engraver or artist do his utmost, he can not possibly make it so beautiful as the original, with the grand old live-oaks and magnolias, and beautiful evergreen shrubs, many kinds in full bloom, while we of the North are suffering from blizzards and zero weather. It was with feelings of regret that I turned my face northward. So busy were friend McK. and I, while I enjoyed the hospitality that is proverbial of the South, we did not look at a single colony of his bees, though he has quite a large apiary. On the morning of leaving, he and his worthy wife gathered a large number of roses, and magnolias; and with shrubs, and leaves of the sago palm, and Japan plums, and the long gray moss of the Southern swamps, made me a large package, which I carefully brought home; and when unpacked were found to be as fresh and bright as when gathered; and surely they formed a contrast to the snow and sleet that prevailed out of doors.

In conclusion, I must say that it does one a great deal of good to go occasionally from home (especially if he can combine pleasure and business), and see how the friends live in other parts of our great country; and I trust you, friend Root, will go to see some of our Southern friends another season, when the contrast in climatic conditions is the greatest and most enjoyable; and I assure you beforehand, on their behalf, that they will give you a cordial welcome, and bid you come again.

Belleville, Ill. E. T. Flanagan.

GLASS JARS

SPECIALLY MANUFACTURED FOR EXTRACTED HONEY.

White flint, best quality and good shape to hold 1 lb., per gross (12 doz.) - - -	$4 00
" " 2 " " " - - - - -	5 50
Second quality; very pale green; extra showy; 1 lb., per gross, - - - - -	3 50
" 2 " " " - - - - - - -	4 00

Free on ship, in 100-gross lots.

Perforated zinc queen-excluder, per foot, in 1000-ft. lots, - - - - - - - - 4c

THOS. EDEY & SON,
7tfd **St. Neots, England.**

M. G. KEENEY, - QUERCUS GROVE,
SWITZERLAND CO., INDIANA.

Fifty full colonies of bees at 60 cts. per lb., in nucleus boxes, during August, or 75 cents per lb. in cages. A queen given with every hive taken up. Make money orders payable at Patriot, Ind. 8

The Bee-Keeper's
HANDY BOOK

Will be sent to any address, to be paid for if the reader considers it worth the price charged for it.

Send for our 22d Annual Circular and Price List of queens and 3 races of bees. 8d

HENRY ALLEY, - WENHAM, - ESSEX CO., - MASS.

QUEENS! QUEENS! QUEENS!

We are now prepared to send you by return mail the handsomest and best queens, bred from our best honey-gathering strains of Italians and Albinos. Purity and safe arrival guaranteed.

Tested queens, each	$2 00
Warranted queens, each	1 00
Warranted queens, ½ doz	5 50
Warranted queens, 1 doz....	10 00
Untested queens, each	90
Untested queens, ½ doz	5 00
Untested queens, 1 doz	9 00

If you want queens for business, send us an order. We are breeding from an entirely new strain this season, which bids fair to outstrip any thing we have ever had before for honey.

Address **WM. W. CARY & SON,**
Coleraine, Mass.

THE OLDEST QUEEN-BREEDERS IN THE UNITED STATES. 8-9d

FOR SALE! **40 COLONIES ITALIAN BEES,** each with tested queen; 10 L. frames, with combs and brood and some honey. Delivered in August or September. Single colony, $6.00; 10 or more, $5 00 each.

8d A. A. FRADENBURG, PORT WASHINGTON, TUS. CO., O.

---

50 SPLENDID COLONIES OF BEES FOR SALE. Every comb straight; will average 4 lbs. of bees, 7 frames brood, and 20 lbs. honey. Price, with $1.00 queen, $4.50; tested, $5.50. Fine imported queens, $3.75 to $4.50 each. Dollar queens, 80c. F. L. WRIGHT, Plainfield, Mich. 8d

---

FOR SALE.—I will sell 5 colonies of bees in Simplicity hives for $45; four have selected Italian queens, and one a tested Cyprian queen, bought of McKay Dougan, of Missouri. All queens of this year's raising, and all bought. Will ship by express or freight, as may be wished.

8tfd WALTER J. HUSSEY, Mt. Pleasant, Jeff. Co., O.

ON HAND,

A limited number of CHOICE TESTED QUEENS. Price $1.50.

L. W. VANKIRK,
7tfd WASHINGTON, Wash. Co., Penn.

Italian & Holy-Land Queens

THE HANDSOMEST QUEENS FOR BUSINESS THE WORLD PRODUCES.

Business, beauty, and wintering qualities combined.

EVERY QUEEN WARRANTED PERFECT.

SIX QUEENS FOR $5.00.

Send me your address on a postal, and get circular. 8d

F. H. SCATTERGOOD,
No. Georgetown, Col. Co., O.

ITALIAN BEES

BRED FOR BUSINESS.

Warranted queens, each, $1.00; per half doz., $5.50; per doz., $10.00. Safe arrival and perfect satisfaction guaranteed. Send for circular. Address

J. P. MOORE, 8tfd
MORGAN, - PENDLETON CO., - KY.

Italian Queens AND Bees.

1 Untested queen	$ 90
6 Untested queens (one order), ...	5.00

Queens are bred from a very handsome and prolific Imported queen. Safe arrival by mail guaranteed. Also Nuclei and full colonies. Send for circular.

ALSO

RESIDENCE, NURSERY, FRUIT FARM, AND BEE BUSINESS FOR SALE.

Situated on corner of Maumee and Charles streets, at the western limit of the city, and contains 7½ acres of land, nearly all occupied with fruit-trees, vines, plants, etc. Also 15,000 to 20,000 Apple, Peach, Pears, Plum and Evergreen and other ornamental trees in nursery, together with Grapevines, Raspberry, Blackberry, and Strawberry plants, etc.

Residence nearly new, two-story frame house over brick basement and cellar. The situation is all that could be desired for a suburban residence, within easy walking distance of the city, graded and high schools, and churches, and within 80 rods of Adrian College, thus affording church and educational privileges rarely to be met with, and a population of 12,000, affords a fine market for fruit, vegetables, etc. Title perfect.

Also 50 to 100 colonies of Bees and fixtures for sale. The location is a fine one for the Nursery or Bee business. The place will be sold alone, or with the Nursery Stock and Bees, as desired. Address the undersigned for prices and particulars.

D. G. EDMISTON, 8d
ADRIAN, - LENAWEE CO., - MICH.

LAND FOR SALE.

A CHANCE OF A LIFETIME.

A two-hundred acre farm for $1000. A tract of land with good water and plenty of timber, in a good neighborhood, with good schools; said land, containing nearly 200 acres, can be had for $1000 (one thousand dollars); the trade must be closed out before Sept. 1, or no sale. Terms, one-third down; remainder in six and twelve months.

Address **CHAS. KINGSLEY,**
8d GREENEVILLE, GREENE CO., TENN.

A BARGAIN!

20 Colonies of Bees for sale, for only this month, in Nellis chaff hives, at $6.00 each. They are on 8 frames of wired-foundation comb. Reason for selling, have too many in one locality.

8d F. A. SALISBURY, Geddes, Onon. Co., N. Y.

FOR SALE!

A steam-mill, good sound boiler, upright engine, 6x16 return crank, slide valve, in good working order; overhauled last winter; one of Chandler & Taylor's side-cutting mulley saws, capacity about 2000 ft. of hard wood; slat saw; large turning-lathe, counter-shaft, etc.; cap auger, boring machine, new; rip-saw table, with cut-off table running on slides; 3 saws; one of J. T. Noy's 30-inch burr-stones for grinding feed, in good order; a complete cider-mill with elevator, hopper-bottom, tin; Boomer & Boschert patent hand-press; 20 lbs. capacity, and two 4-screw hand-presses; vats; hoisting apparatus, etc.; Shafting and pulleys and belts all in place, and all in running order.

This property is 5½ miles from Romeo, in one of the nicest neighborhoods and localities in the State. A church ¾ mile, and new schoolhouse ½ mile distant. It is a splendid location for an apiary, as the nearest to amount to any thing is two miles. There is plenty of basswood, which a man can buy cheap, and manufacture sections, hives, etc. The fall and winter would be fully occupied in making cider, grinding, and sawing. It is a great stock section, and a great amount of feed is ground. The log-cut this year was about 100,000 ft. The fruit-ladder business is a good one also.

There is a growing demand in all this section of country for implements for the apiary, which is not satisfactorily filled near at home. The right man with this property can not fail to make a nice thing out of it. We could make thousands of sections from custom, sawing slats. I manufacture all my ladder-rounds from ash slabs, at a trifling expense.

I want to sell, because I have other business and property too far from this to attend to both. I will sell the machinery and fixtures for $1700, and give the use of building, and as much land as may be needed for log-yard for the ashes and sawdust. Will take $1000 in sawing at $3 00 per 1000 ft., and the remainder down, or give some time to suit purchaser. The Ex-President, Hon. Geo. W. Phillips, of our State Agricultural Society, lives within ½ mile of this property, and I would refer to him as to the correctness of these statements.

There is a small house near that can be rented, or can be bought with 15 acres of nice land, with small orchard on, and a suitable place for apiary.

F. JAY CROAT,
SMITH, - ST. CLAIR CO., - MICH.
8tfd

CHOICE WARRANTED
ITALIAN QUEENS AT $1.00 EACH.
SATISFACTION GUARANTEED.
CHAS. D. DUVALL, - SPENCERVILLE, - MONT. CO., MD.

KEGS FOR HONEY, ALL SIZES
8-9d E. T. LEWIS & CO., TOLEDO, O.

W. Z. HUTCHINSON

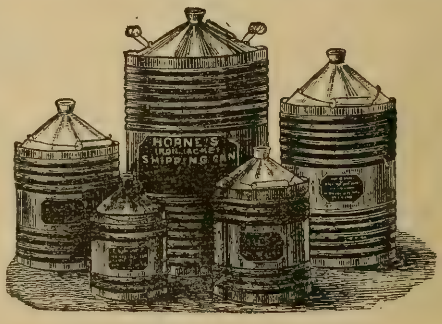
Rogersville, Genesee Co., Mich.,

Makes a *specialty* of rearing fine Italian Queens. All queens bred from imported queens, and from the purest and best home-bred queens, and the cells built in full colonies. No black bees in the vicinity. Customers can have either light or dark queens. Orders filled *promptly*. Single queen, $1.00; six queens for $5.00; twelve or more, 75c each. Tested queens, $1.50 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich.

WANTED.—Extracted clover and linden honey; *must* be *pure*, and of GOOD *quality*, and from apiaries where there is *no foul brood*. Will pay 10c per lb., delivered at our depot. Don't ship until you have sent for particulars.
8d F. V. SARGENT, Hubbardston, Wor. Co., Mass.

CANADA ONLY.
Summer Rape Seed For Sale by
H. SMITH, Box 102, New Hamburg, Ontario, Canada. 8tfd

SHIPPING-CANS For HONEY.



"Iron-Jacket" Honey-Cans.

I presume the friends are aware that ordinary tin cans are not very safe for shipping full of honey, unless boxed or crated. The cans above are ready to be shipped anywhere.

PRICES.

1 Gallon,	$0.25 each.
2 "	.38 "
3 "	.47 "
5 "	.68 "
10 "	1.10 "

By figuring 11 lbs. of honey to the gallon, you can easily see how many pounds each can holds. They are made from tin plates. A sheet-iron casing, with wood bottom, protects them from bruising. The iron jacket is stronger than wood, and far more serviceable. They neither shrink nor swell, and do not split nor fall apart. Every can is tested by steam and guaranteed to be tight.

A. I. ROOT, Medina, O.

Recent Additions to the
COUNTER STORE.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
	GLASS HONEY PAIL, ⅓ pint	45	4 00
	TOY GOBLET, several different designs, just as pretty as can be	45	4 00
3	CHILD'S CLOTHES-BRUSH, just as "cute" as can be	45	4 00

FIFTEEN-CENT COUNTER.

15	HONEY OR MOLASSES GATE, made to screw into a barrel, ¾ inch bore	1 40	13 50

This, although rather small for honey, is very useful for a great many purposes.

Thirty-Five Cent Counter.

9	POCKET-WRENCH, 5¼ inches long	3 00	25 00

Nickel-plated. Will open so as to take a nut 1½ inches square. A very useful and pretty tool.

	INK-STAND, heavy glass. Ink can't be spilled	3 25	31 00

One-Dollar Counter.

20	HACK-SAW, for sawing metals, etc.	8 50	80 00

One dozen blades included with each; extra blades, 5c each, 45c for 10; or $4.00 per 100.

64	BOOK-SHELF or HONEY-STAND. For description, see July JUV., page 417	8 50	80 00

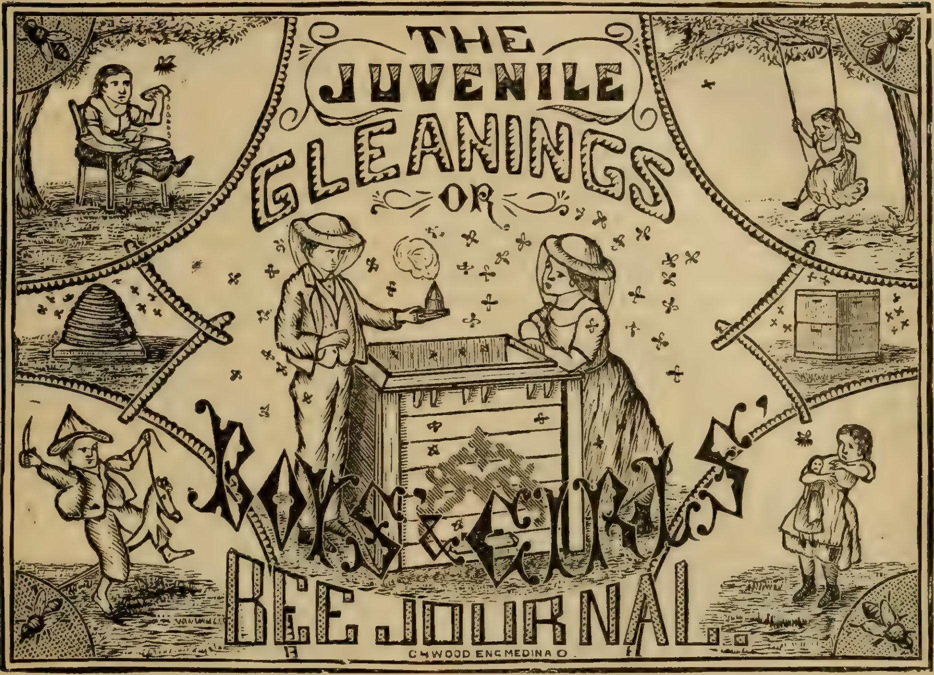
This was primarily designed for a book-shelf, but makes a nice case for displaying honey, as it can be hung up on a stout hook or screw put in the wall.

FOR $4.00.

BEE-KEEPERS' WHEELBARROW. Made all of metal, except the box, which is plain, and can be replaced by any one who can use a hammer and a saw. For further description see July GLEANINGS, 1883. Price, $4.00; 2 for $7.75, 3 for $11.00, or 5 for $17.50.

A. I. ROOT, Medina, O,

GLEANINGS IN BEE CULTURE EXTRA.



He that is faithful in that which is least, is faithful also in much.—LUKE 16:10.

PUBLISHED BY A. I. ROOT, MEDINA, OHIO.

Vol. II. AUG., 1883. No. 5.

MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10:29.

Every one that asketh receiveth; and he that seeketh findeth; and to him that knocketh it shall be opened.—MATT. 7:8.

IT must be eight or ten years ago, children, when I first concluded, after a good deal of faithful deliberation, that I wanted to be a Christian; or, at least, I decided that I wanted to be *with* Christians, and on the side of Christianity. I remember one Sunday afternoon especially, when my thoughts were first turned quite forcibly in that direction. The circumstances were something like this:

One of our townsmen had a cider-mill, and he made cider. I kept bees, you know, and the bees made honey, or gathered it for me, to be precise about it. Well, every fall I had trouble when he made sweet cider; the bees would come and stand on his "cheese," and suck up the sweet cider as fast as he could squeeze it out. In fact, they seemed to think that he squeezed it out on purpose for them. And finally my Italians came in such droves, that, when he turned on the screws to the press, they took every bit of the juice that was squeezed out, and he did not have any at all to run into the tub. After a good deal of hard talk about it, I decided to move my bees away until cold weather. So I hired a man with a team, and, after a great deal of fuss, we loaded them up and started off. I did not feel very happy about it, because I took them away under protest; and at that time I was not asking God about all these things, and asking him to tell me what was the best thing to do. It rained that afternoon; and after we set them down in the field, off by a dreary-looking swamp, I felt rather sad and homesick. As it was pretty well along in the fall, the rain cleared off, and we had a frost that night, thus killing the flowers in the swamp, so that my bees were away from home, with no one to care for them, and no prospect of any honey being gathered. This was Saturday night. As I was not a church-going man, of course I went off to look after my bees on Sunday. To save expenses, I went on horseback, for I did not have any horse of my own; and as I expected to overhaul the hives, I went in my every-day clothes. As I neared the bees, well-dressed and intelligent-looking people stared at me as I passed them, to see me in my every-day clothes, so far away from home on the Sabbath.

I had a dismal day with the bees, and started back just in time to pass the people again on their way home from church. Then the question came up in my mind, Was I doing right to be thus attending to my week-day duties on the Sabbath? Was I satisfied that the public at large should class me as one who had no respect for God's holy day? I felt a good deal troubled. I wanted to be considered on the side of all good people; and I remember, as I rode home that Sunday afternoon on horseback, that I thought of my mother's teachings, and of my little prayers that I used to say at night when I was a child, before going to bed.

It was not many months afterward that I changed my life over, at least in a good many respects. I went to the prayer-meetings I had so often ridiculed and found fault with, and stood up and spoke in meeting. Among other things I spoke of was the comfort one feels in this world when lending a helping hand, and doing good to others. About this time a little girl came to me, asking for work. I did not have very much work to do then, for I employed only a few hands. I told her that I did not know of any thing that I had that she could do. Finally she came again, and this time it was just after I had spoken at an evening meeting the night before. Her words were a little singular, and attracted my attention. If I remember correctly, what she said was this: "Mr. Root, you *must* give me some work." I looked up at her, a little surprised to think she would say *must*. She returned my look quickly, and seemed to be in such real earnest that I finally concluded to set her at work at something, at any rate. She was the daughter of an old friend whom I used to know when I was a child, but I was not much acquainted with her when she was grown up.

Just about that time I was bothered and perplexed about the subscription list of GLEANINGS. Although there were only about 500 names then, as I kept all the books and set all the type, reading all the letters and doing all the correspondence, it was quite a little care to attend to it all with my other duties. Without any hope that she could manage it, I told her to take all the letters and all the names, and attend to the whole of it herself. She took hold of the work with eagerness, set the type, and set it correctly, almost at the outset, with scarcely a bit of showing from anybody, and in a very little time I thanked God for sending her to me. And I was glad, too, that she spoke with that very importunity; because if she had not, in my want of faith I should have sent her away. I had just begun to be a praying man then, and I prayed for her as I do for the rest of our workers, and she at once showed a wonderful aptness for every thing pertaining to letters and people. She delighted in letters from foreign countries, and soon knew more about the proper postage to all parts of the world, than even the postmaster himself. As GLEANINGS began to grow, and the subscription list increased, she showed herself perfect master of the situation; and, to make a long story short, has, during all these years, been one of the main stays of our whole establishment. To really appreciate our friend "Lu," for it is she of whom I have been talking, one wants to get somewhat acquainted with her. Through all our work and business she has something of that queer trait that first attracted my attention to her particularly, of telling folks what they must and what they must *not* do. I have sometimes wished our customers with whom she has had a large correspondence knew her as well as I do, that they might know what a kind heart stands back of her abrupt and somewhat brief way of talking or writing.

Well, now, friends, when our new factory was first started, there was some talk of a corner-stone connected therewith. Lu, among others, prepared a paper for it. But the whole matter was potsponed on account of sickness among the clerks. Perhaps I should add that the great business of the present year overtaxed her powers, and she is now away from us, with several of the others, to recruit. Well, a few days ago she asked me if I cared to see a paper she had prepared for the corner-stone occasion. And now this same little paper I want to submit to you. If it doesn't give you a friendly feeling toward Lu from now on, even if she should write short, to you, I shall be very much mistaken.

THE EARLY HISTORY AND LIFE OF GLEANINGS.

When Novice began to tell
His experience with the bee,
The story pleased so well,
"I'll be an editor," said he.
And GLEANINGS, of ten years ago,
Was a *tiny* sheet, indeed,
But it soon began to grow
With extraordinary speed.

Tho' "Barney" was a novice then,
And the "boss" was typo too,
And wrote his copy with a pen,
Still, GLEANINGS lived and grew.
Then the windmill ruled the day,
Or the press went by foot-power,
That there might be no delay
When GLEANINGS ruled the hour.

All hands were called to "fold"
When GLEANINGS went to press,
And the "paper-day" of old
Was one of pasty mess.
Soon the type-writer's click was heard,
And the pen was put in the rack;
The windmill flew off like a bird,
And an engine "took the track."

The subscription list grew longer,
And business multiplied;
Our Homes made GLEANINGS stronger,
'Twas "on the Lord's side."
We have garnered golden sheaves
Which steadily grew in store—
The A B C book leaves,
So rich in bee-man's lore.

The spiteful little engine steamed
And puffed both night and day,
And orders, more than we had dreamed,
Came from regions far away.
Two busy years went by,
And we found our space too small,
So we built a factory
That we *thought* would hold us all.

While an engine, stately, strong,
Drove an endless line of belting,
And the buzz-saws hummed a song
Whose accents were *not* melting.
From our large new printing-press,
Which filled so well its place,
Came GLEANINGS in new dress
('Twas worn with smiling face).

Her "Heads of Grain" did far exceed
The "Blasted Hopes" recorded,
And "Reports Encouraging" indeed
The "Smilery" rewarded.
The boys and girls wrote letters, too,
To say that "pa keeps bees;"
To a wheelbarrow load the letters grew,
And yet they did not cease.

So JUVENILE followed behind
And carried the letters along;
Impelled by a "Hasty" mind,
It soon grew large and strong.
But, alas! the factory's too small;
Oh, joy! we'll build again;
We now behold the rising wall,
Dotted with busy men.

Soon the cheerful buzz of "biz"
Will fill the new wing too,
And Novice's contented phiz
A broader field will view
At the dear old noon meeting
By the organ clustered round,
During the ten moments fleeting,
Which daily we have found.

So, long live GLEANINGS and JUVENILE,
With a fat subscription list;
May they always carry peace — good will,
And the helpless ones assist.
When Novice has grown old and gray
In the Master's service here,
May he hear the voice of the Master say,
"I'm with thee, never fear."

PAUL PRICE AND HIS PETS.

WHERE HE LIVES, WHAT HE DOES, AND HOW IT PAYS.

WE have been both instructed and amused by the many communications from bee-keepers in GLEANINGS; and seeing nothing from this part of our country, concluded to write. Bee culture was much neglected here until Paul Price, a boy of 15 summers, embarked in this fascinating pursuit, which has given it an interest and impetus of rapid and healthful growth. I wish to tell you of Paul and his "honey-pets;" but "writing in regard to matters concerning which one's knowledge is limited," may not be pleasant for your readers. I know nothing of bees, except what I have learned through GLEANINGS and Paul's instruction. But of *Paul* I know every thing. He is not an enthusiast, but an earnest, constant, watchful, hopeful worker, and is seen early and late among his pets. He is not only mamma's bee-man, but is and has been, ever since he could toddle, her chief help in housekeeping. On wash-days his time is divided between the washer and the bees; and with mamma's help in making up the "batches," he is as successful in the cleansing art as with his pets. He began last August with two colonies of Italians and one of black bees. The blacks did not live long, the Italians making war upon them, which we supposed was the cause of death; but now we think the queen was either killed or disabled in transferring. Besides, he bought one stand for the honey, giving away the bees; and from all these he sold 100 lbs. of the most delicious honey, besides having all they wished for the table, from August till the late winter months — that from the black bees being by far the richest and most delicate in flavor.

So far as our experience goes, we find that the black, or wild bees, are the best workers, and produce the superior honey in the hives, but they are not so kind as the Italians. This may be accidental, or does it apply generally? I know so little of these interesting little creatures, I am almost afraid to write. He carried his two colonies safely through the winter, keeping them during the severest weather, in the store-room, up stairs, with the window open; finding them thriving and healthy in the spring, with an abundant supply of honey till long after they began gathering from fruit-bloom and other early flowers.

After giving the subject careful study, mamma and Paul are of opinion that the great problem of wintering is solved by bountiful stores of honey, and shielding from the north-western winds. We had quite a blow last night, and, amid our anxiety, the question was asked, "How does Mr. Root protect his bees from storms?" How does he? Paul finds that a brickbat does not always keep the caps on. Surely there is some better way.

But I am always flying off at a tangent. In addition to these two colonies, he bought in the spring three more, and now has a nice little apiary of nine hives, strong to overflowing, and the bees possessed of no other impulse than to collect and store the honey. One he formed by taking two frames from a full hive, with the queen and bees clinging to it, and placing in another. By further reinforcement this has become as strong as the others. He uses the Langstroth hive, and, by the help of Howard, his younger brother, makes all he uses. They have their tools and lumber in the upper hall, and they are as busy and happy as the other little workers. It is a very pretty and interesting sight — these colonies dotted about under the trees, each one with the name of its queen in bright blue letters on the front. His most beautiful young queen, a present, his queen of queens, he calls *Sue*, in honor of your wife; then comes Blue Eyes, followed by Josephine, Stella, Vanessa, Marie Antoinette, and others, with the only wicked one, Beatrice Cenci, on the outskirt. He opens the hives, takes out and looks over the frames every day, running his hands and fingers over and through the depths of workers, often without veil or smoker, and rarely ever with stings. It is wonderful how gentle he has made them. They have the lower stories filled with brood and honey. So far he has taken out but little honey; has never used an extractor; he has none, but will have next year, when he expects to buy 20 or 30 colonies more. I suggested to him greater ventilation during these hot days, but he found, on trying it, that the bees sought the darker and remoter places, and therefore concluded much air and light not desirable for them. He seems to understand transferring, and is pretty successful in general management. How closely he watches their progress! Several times a day he looks through and studies them up; and what a delight he takes in showing the broad white sheets of comb, filled and sealed!

This seems to be a splendid locality for bees, as there are plenty to be found in hollow trees in the woods. In this valley nature is so bountiful, and there is so constant a succession of nectar, that it would indeed be strange if the honey-bee found not a home here. The comb found here is very white, and the honey of a bright amber color, of fine flavor and taste. Our home for this little worker is situated in Saline Valley, and, in its wild grandeur, is beautiful throughout, with hills on one side and a fine stream of pure water on the other. The whole vegetation seems to produce peace, sweetness, and honey. The locust is abundant in the grounds around the house, and this spring were a mass of snowy-white flowers, thrilled by the hum of the little workers.

Just here I will say that my sister is contemplating cutting away these beauties, and replacing with fruit-trees. But then, there is such an abundance of honey-bearing plants they would be no great loss in that respect.

Paul wishes to have some honey on exhibition at the Farington Fair in the fall, and would like to know the most attractive shape in which to present it. Will you be so kind as to instruct him?

POISON HONEY.

Is it not strange that bees will gather honey from poisonous plants? We have none here, but I have read of poisonous honey of the Southern States, and the effect it produces upon those who eat of it, and it is similar to that produced by the honey of many, many centuries ago, and in a country far across the seas. In Xenophon's Anabasis we read, "Having passed the summit, the Greeks encamped in a number of villages containing abundance of provisions. As to other things here, there was nothing at which they were surprised; but the number of bee-hives was extraordinary, and all the soldiers that ate of the combs lost their senses, vomited, and were affected with purging, and none of them were able to stand upright; such as had eaten a little were like men greatly intoxicated, and such as had eaten much were like mad-men, and some like persons at the point of death. They lay upon the ground, in consequence, in great numbers, as if there had been a defeat; and there was general dejection. The next day, no one of them was found dead; and they recovered their senses about the same hour that they had lost them on the preceding day; and on the third and fourth days they got up as if after taking physic." This was in Colchis; and that there was intoxicating honey in that country is attested by the ancients, as also by modern travelers and writers. Pliny mentions two kinds of it — one produced at Heraclea, in Pontus, and the other among the Sanni. The first came from the plant ægolethron, or goat-bane, the other from rhododendron.

One request more from Paul: It is cards — motto cards.

I can not begin to tell you the pleasure and comfort we find in "Our Homes."

MRS. L. B. ROOTE.

Coffman, Mo., July 13, 1883.

Thank you, my good friend, for your very interesting sketch of one of our juveniles. While the honey made by the black bees may be whiter, in consequence of their not filling their cells clear up to the caps, as the Italians do, I never before heard that the flavor of the honey was any better or richer. Your idea, too, is a little singular, that the blacks are better workers. I think it must have been an accidental case.—Although Paul succeeded in carrying the bees up stairs during cold weather, I do not believe such a course advisable, as a rule.—We seldom have winds here that blow off the covers to the hives. Sometimes a thunder-gust in the summer time displaces the roofs of the chaff hives; but this happens so seldom that we never think of fastening the covers down in any way. When they blow off, some of the boys put on a rubber coat and go out in the rain and put them on again.—I am sure there will be some smiling among the juveniles when they read the names of Paul's queens. My grateful thanks to him for remembering the name of my wife. Years ago my heart learned to bound at the sound of the simple little syllable, "Sue;" and God grant that the time may never come when those same happy old associations fail to spring up at just a sight of the name, even in print.—Paul, you and I are bound to be friends; and if we do not see and meet each other face to face, I hope we shall hear from each other often.—In regard to ventilation, I, too, have decided many times that too much ventilation was detrimental to rapid storing and comb-building. I found that the bees seem to crowd back to the corners and the less exposed places.—Thank you for your extract in regard to poisonous honey. You will find something similar in the A B C book. And is it really possible that the honey from the beautiful rhododendron is said to be poisonous?—I am glad to see that concluding line that tells us that Paul loves not only the bees, but the Sunday-school, and, I trust, his Savior.

A YOUNG BEE-KEEPER OUT IN THE WOODS.

BEES, HONEY, RAIN, ETC., IN MICHIGAN.

BEES have done well so far between showers. I have extracted as high as 105 lbs. of white-clover honey from some swarms up to July 15. After working two days on basswood they rested two or three days during a shower; but this morning they came in like a young robin alighting on the ground. I like to see them do that; it makes a fellow fly around and drive hoops, make bungs, and move brood to keep them from swarming. I have had but two natural swarms this season, having increased from 33 to 56, all in upper stories. Some fill two. I have also 14 two and three comb nuclei to keep queens in. I put these queens into hives that have just cast a swarm after moving queen-cells. I think I gain nearly a month. You see, they have a laying queen all the time then, so the bees can't fill the brood-nest with honey. When these nuclei get strong, say about five combs, I fill them up with combs of brood, and put on upper story all at once, making a good strong swarm. I want to increase to about 100, so you see I shall need that foundation-machine in about two weeks.

FERTILE WORKERS.

In the swarming season I have a swarm in with them, or change stands with them and some strong swarm, and introduce a queen or cell.

CHOOSING A LOCALITY.

This is my first season here with my bees. I moved 15 miles last August with 40 swarms, after extracting nearly all the honey out of the brood-nest. I got 1600 lbs. of honey after moving, and left hives full for winter — all fall honey. Thirty-three came through strong, out of forty, all in chaff hives. The deer-mice got in some and killed them, or disturbed them. I am surrounded by timber; soft and hard maple, basswood, oak, willow, cherry, and pepperidge are the ones that yield the most honey. Plenty of improved land, swamp and hay marsh, all within half a mile. With clover, berry bushes, boneset, goldenrod, fireweed, and touch-me-not, hundreds of acres within reach, I think I will try to overstock if I can. It now rains soft water again. There are lots of places just as good as this, yet most bee-keepers locate near town, and in old improved country, for convenience, not honey. Why don't more boys learn to handle bees? I shall need one to help me when I get overstocked with work. I shall increase until I get all I can handle.

QUESTIONS I HAVE TO ANSWER VERY OFTEN.

Are there bees in all of those hives?

Do they swarm like that all the time?

Are those barrels full of honey?

Don't you get lonesome here alone? I should think a bear would come and knock them to pieces, and drum you out too.

They call me the bee-boy. Now, Mr. Root, I suppose you would get lonesome after being there with so many; but I, with all of my bees, and a garden to hoe, having a house and a wintering house to build, don't find myself alone much.

I should like to send a sample of honey-plants, but it would take a large box to hold them all. You may name my apiary, if you have a name handy.

It thunders again. Now it rains, or, rather, drizzles. F. E. TOWNSEND.

Newark, Mich., July 24, 1883.

Friend T., I have put you among the juveniles, although you have not told us your age. But I judged from your letter that you must be a boy; if you are not, you have certainly given us a boyish letter. You ask if I would not get lonesome. Well, it seems to me it would be just about the nicest thing in the world to be away off in the woods with the bees — for just a little while, any way, so I could take a little rest. Is there a nicer thing in the world, anyhow, than bees and woods? I have been through your Michigan forests, and I know a little of them. Your idea of giving a laying queen to a colony that had just swarmed is a good one, and I guess your plan of managing fertile workers is about as good as any. I guess we will name your apiary the "Woodland Apiary." How will that do?

MAKING METAL-CORNERED FRAMES.

ALSO SOMETHING ABOUT THE MAN WHO MAKES THEM.

THE hives and all the rest of the goods came to hand all right, and I am very much obliged to you for the extra comb-guides. I have all the frames made up, and ten of the hives. It is nice to work your stuff, for it is so true, and makes a good fit, and that is what I like. I will tell you how I make my frames. I took a 4x4-inch scantling, and sawed it off so it would stand on end, and come four inches higher than my knee, and put the iron in the end of it, and I was ready to sit down by the fire with those nice bunches of frames, and put the corners on. I made about 50 or 60 every night, and it was nice, for I was not in the road of any one, and no dirt to clean up, though I took them out of the box and cleaned the dust off, and bundled them up again. I want to give those 50 hives two good coats of paint. HUGH VANKIRK.

South Strabane, Pa., 1883.

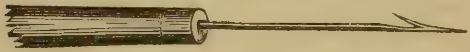
Friend V., your account of the way in which you make your frames reminds me of something I shall have to tell the little folks. Some years ago, when I used to have a Sunday-school at our county Infirmary, I met there a poor man who was not only perfectly deaf, but had lost the use of his legs, so that he had to get around in a sort of a chair with wheels to it. Well, one day last winter I was surprised to get a letter from this man. He wrote a nice plain letter, and said he knew me well, for he had been at our meeting, and had heard me "preach." Perhaps he did not say exactly that, but it was pretty near it, and then I remembered that I had seen him in his rolling chair among the rest of the inmates there. When I went around after the school was out, I had shaken hands with him among the rest, and in that way he knew me. It sounded a little funny to hear him tell about hearing me preach; funny for two reasons; first, the idea of my "preaching;" and second, the idea of his hearing, when he could not hear a word that I or anybody else had said. But then, you know, he liked to come into the "meeting," as he called it, because he saw there a good many well-dressed people with smiling faces; and in some way it did him good to see them all look nice and happy. Well, what do you suppose he wrote about? Why, he wanted to come and work for me! He said he could write, or he could drive nails, or do almost any thing; and how he did tease and coax to have me help emancipate him from the bondage and stigma of being in a "poorhouse"! I told him when it got warm we would try to give him work, and to-day he sits over in the brown house where we used to live last summer, pounding away day after day with his little hammer, making metal-cornered frames. In fact, he puts together all the metal-cornered frames that all the bee-keepers use who order frames of us already put up. He makes all the frames for wired frames also; and he has become a great favorite among all the hands of our establishment. At noontime, whole droves of girls go over there to see him and talk with him. He talks, you know, and they nod their heads, or write on the slate, and some of them talk to him by the deaf-and-dumb alphabet. I wonder if you know how that is done. It is done by making letters with your fingers. Some time may be we will tell you more about it. But I think you will find all about it in the big dictionary.

Well, now we come to the point of our story. Mr. DeLong makes all his frames by having the iron block driven in the end of a post, or piece of scantling, which stands up between his knees. I wonder what he will say when he sees what is told about him here. I should not wonder if he would write a letter for the next JUVENILE, for he loves children, and he loves company. He says he gets awful lonesome when no one comes to see him. One other thing that makes him lonesome sometimes is, that he used to be a great smoker; and one of the conditions under which he could get away from the poorhouse and earn his bread by the sweat of his brow was, that he should give up smoking; for you know we do not allow anybody to work here who uses tobacco in any shape. I suppose he misses his pipe sadly, and I have sometimes felt real bad to think he must be deprived of it. Shall we not remember him, children, when we say our prayers at night, and ask God to help him to be strong in a good cause? There, I have told you something about one of "my neighbors," without thinking of doing it, haven't I?

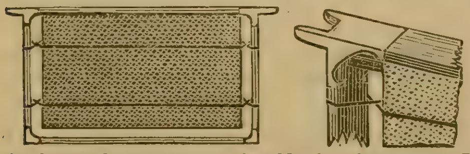
A NOVEL METHOD OF FASTENING FDN. INTO FRAMES.

ALSO A HARPOON TO SPEAR WORMS WITH.

RIGHT here in the midst of the honey harvest I must stop and tell you of two inventions which we now use in our apiary. The first is a kind of spear which we use for picking drones and wax-worms out of the comb. We find it a very handy tool. The other is for fastening fdn. into frames, either wired or not wired. The spear is made by heating a fish-hook, and straightening it out; place this in a handle about four inches long, and it is complete. The barb is left on the hook.



The bees would not take the worms out, and we *had* to. This pulls them out "quicker." The way we fasten our fdn. in is the idea of "my pard," Mr. W. R. Bates. We use ordinary cotton string for fastening. I am a very poor hand at writing out a description of any thing, but I think by the aid of the accompanying sketch I can make it plain. I lay



the frame flat, then put the fdn. in place; next I take a piece of string long enough to go twice the length of the frame, and tie; pass one end *under* the end-bar of frame *over* the fdn., and *under* the other end-bar; now bring it back *over* the end-bar *under* the fdn., and *over* the first end-bar, and tie tight. Two strings are enough for each sheet of fdn. This puts the fdn. exactly in the middle of the frame. Now, to bring it tight against the top-bar, slip the string, indicated in the sketch, just a trifle toward the top-bar, and the frame is finished. This, of course, is not as good as wired frames; but when one's work is walking right over him, it is a splendid time-saver, and works just as well.

Barrington, R. I., May 22, 1883. A. C. MILLER.

Thank you, friend M. We have so few worms in the combs in our apiary that we would hardly find use for your spear. When we had many black bees I used to carry a fine-pointed single-bladed penknife in my vest-pocket. Your plan of fastening fdn. is indeed ingenious and novel; but we should have no use for it here, because we have our fdn. all put on wires. It may prove a valuable aid to those who use fdn. by hanging it by one edge; but how about the expense of so many strings? Do not the bees bite off the strings so they can not very well be used over again?

AN A B C SCHOLAR ONE MONTH OLD.

A GREAT ADO ABOUT A DEAD QUEEN.

I WONDER if you do not think that a pretty big "yarn," children. We have had letters from children six years old, five years old, and I do not know but that we have had some letters from some only four years old, and perhaps younger still. Now here is one from a "child" only one month old — in fact, not quite that; and if he is not a child in years, he certainly is in bee culture. Just hear him, will you?

Friend Root:

The sample copy of GLEANINGS sent me a few days ago pleased me so well that I inclose $1.00 for a year's subscription. Please commence with the August number.

It is only a month ago that I concluded to try my hand at bee-keeping, and the manner in which my enthusiasm was fired up is somewhat similar to your own experience, related in your introduction to A B C, differing only in that my interest was first aroused by a dead queen being casually shown me by a friend in my office. I asked him some questions, and then dropped the subject. About an hour or so the spirit of that dead queen returned, and, like Banquo's ghost, it would not "down." I could not dispel the subject from my mind. I resorted to my library, took down Appleton's and also Chambers' Cyclopedias, and read the articles on "Bees and Bee-Keeping." This little taste excited my appetite for more. I consulted the Brittanica and the German cyclopedias, reading with avidity and interest what they had to say. Now, my further search was stopped as far as my library was concerned. I went to a bee-keeping friend, and procured Cook's Manual. I flew over its contents, and re-read it carefully. I wanted more, and was told to read A B C. I sent to Chicago; and when it came, I read it through with pleasure. About this time my fascination for bees was so great that I secured two Italian nuclei, and set them to work, consulting constantly my A B C, as to what to do in certain cases. I have had them about two weeks, and everything looks prosperous.

Although a month ago I was entirely ignorant about bees and their habits, yet by the most incessant study I have obtained some little knowledge of this wonderful insect family, the acquiring of which gave me more pleasure than any thing I ever sought after before. I am afraid that I did not study law with such industry as I did bee-keeping.

I am not much given to hobbies; but this hobby is one which I am determined to stick to for better or for worse; and although I have been severely stung, I consoled myself with the Irishman's soliloquy, "Goodness! ain't his foot hot?" and put a good face on the matter, when my wife gravely inquired why I was blowing my finger.

There are about 1000 colonies of bees kept in this city, and I doubt if more than three bee-keepers understand the proper handling of bees. A bee-keepers' association has been formed, and it is the object to bring about better results. As far as my own efforts are concerned, I will try to disseminate bee literature to those in need of it — not with any view of profit, but to place others in possession of necessary knowledge for their own good. I have already made a soul happy by inducing him to buy an A B C, which he has done, and is now reading it carefully. Although keeping bees for two years, he did not even know how the inside of a hive looked. Comb foundation, section starters, etc., he had never heard of. To bring the ignorant to the fountain of knowledge is a pleasure I never deny myself.

LOUIS C. SCHWERDTFEGER.

Lincoln, Ill., Aug. 2, 1883.

Friend S., I am very much obliged indeed for your kind letter. I enjoy it almost as much as you do, hearing how you followed up the subject, and saw it unfold before your eager eyes. Are not the little chaps funny and pretty too? And those stings, I suppose you took them with about the same heroic spirit that you would take a pull on your whiskers from your six-months-old baby. They hurt, to be sure; but suppose they do; the little chaps mean well, and really have not learned better yet. Go on, my good friend S., and let us hear from you again. When busy throngs make the air resound, and the honey comes tumbling in at the rate of a hundred pounds a day during the basswood bloom, sit down and think how it all came about, and raise your heart to God in thankfulness and praise that he has in his wisdom prepared these avenues and labyrinths of knowledge, ready to yield their rich stores to him who will work and study. "Knock, and it shall be opened unto you." Friend S., dare I take the liberty of asking if you are on the Lord's side too, as well as a devotee at the fountain of knowledge, as you so graphically put it in your closing sentence?

OUR LITTLE FRIEND VICTORIA FIELDS BY THIS TIME.

HER BEES, HER GARDEN, ETC.

DO not say "blasted hopes" to me before next spring, for I think our bees are doing so well that I do not know in what words to express my gratification to the "blessed bees." One colony has given us two good swarms, and a good lot of honey; I can not say just how much, as part of it was not weighed.

Now I must tell you something about one swarm that was new to me. They swarmed out and partly clustered; but before we could do any thing with them they returned to the old hive, and the next day they came out again and clustered; but before we could do any thing with them they returned to the old hive. So we left the hive and all ready, just as we had them, to put them in. On the next day, June 28, they came out and clustered on the same limb, and as they had each time before; and this time we got them in the hive. As we were hiving them, we found the queen as pretty a hybrid, with two bands, as you would wish to see. But now comes the mystery. As we had them nearly all in the hive, in crawls a young black queen. Now, papa says (he was helping me what he could), "They have two queens; that is the reason they went back, and were so hard to do any thing with." But they went to work nicely, and we put the upper story on, and cover, and in the evening we went to look at them, and removed the cover, and by some means the black queen had made her way up past the cloth, and she and a few bees were clustered in the upper story. Papa said, as they had a couple of frames of comb we would hunt for the hybrid queen; so the first frame we lifted, here was our queen all right, and she had been laying eggs. We shut them up just as we found them, until morning; but in the morning all bees were below, and the black queen gone. She was found in front of the hive dead, and the bees are doing finely now. Our first swarm has their hive filled the lower story, and storing honey above.

I wonder if all the little bee-folks are as busy now as I. I have to hoe in the garden, and attend to the bees. I hoe corn sometimes, and potatoes, and attend to Myrtle while mother works. I suppose the little folks in the JUVENILE will not think much of a little girl who does such rough work. Well, one whom I honor and labor to assist says that honest labor degrades no person. Papa says, give his regards to Mr. Root, and to thank him for the many hours enjoyment he has afforded him in perusing GLEANINGS and the A B C, while unable to work.

Valley Point, Pa. V. J. FIELDS.

Your case is a little hard to explain, Victoria. I should have said that the queen was crippled, and unable to fly, as an explanation of the bees going back so many times; but when you tell us about finding two queens in the swarm, it becomes a little more puzzling. Is it not possible that a small swarm with an unfertile black queen united with your swarm without your observing it? This would explain matters fully. When you found the young black queen in the top of the hive, she, with her retinue of bees, should have been given some combs, and a new colony started somewhere else. It is always unsafe to leave two queens in a hive. In your case it happened luckily for you that it was the small black queen that was killed. It might have been otherwise. We know the hybrid queen was an old one, for you say you found eggs which she began depositing immediately.—Do not feel sad, friend Victoria, because your circumstances happen to be such as to oblige you to work every day, and some days pretty hard, perhaps. I have often thought it a sad misfortune to those who are brought up where there is no necessity for steady and constant work.—Thanks for your very kind words; and may God's blessing rest with you and your little household.

QUEENS SOMETIMES STING.

POSITIVE PROOF GIVEN US BY ONE OF THE JUVENILES.

I WILL give you my experience about queens stinging, as you do not think they sting. We divided a stand of bees the 28th of May; when the queens hatched they swarmed; and when we had hived them, we opened the hive where the swarm came from, and found one queen and two queen-cells. We took them out; and when they ran on my hands, I laid my hand across my arm so she should not get under my sleeve, and I suppose I must have hurt her, for she stung me. You may think it was a bee that stung me, but it was the queen; but she did not leave the stinger; but the hand swelled as badly as a bee-sting that I got the same day. We put her into a hive, and she is laying now. Another tried to sting father the other day, but did not succeed.

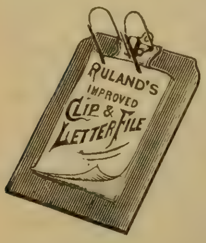
We get swarms faster than we want them. We have had a good honey season so far. Father had a fire the other day; he did not have the damper shut. He burned his veil and hair a good deal, but did not hurt himself much. BERTHA M. LARSEN.

Fairview, Sanpete Co., Utah.

Many thanks, Bertha, for the important facts you have given us. I have never been stung by a queen, but I have seen young ones sometimes put out their "stingers" as if they meant to sting.—Be careful about getting your clothing on fire when working with smokers. We hope your caution will prove a timely one. Sometimes a little fire may drop out of the smoker, and we should always be on the watch to see where it goes, and that it is safely extinguished.

A NEW LETTER-CLIP.

A CONVENIENT IMPLEMENT FOR FILING AWAY LETTERS, INVOICES, OR OTHER PAPERS.



THE implement we illustrate below consists of a walnut board 9x12 inches. Near the top, as you will observe, are two stout rigid wires. The ends are sharpened to a slope, and on these upright wires the papers are to be pressed down, making two holes in each paper. The sloping points to the wires, however, go through the paper in such a way as to turn back a sort of a cap, as it were, like the cap to a queen-cell, somewhat; and as this cap comes back into position as soon as the paper is removed, none of the writing is obliterated. Now, besides these two upright wires is another pair of wires something like a fish-hook, and these latter spring back when the papers are put on. After the papers are all on, these hook-shaped wires come forward so their points strike the sloping point of the stationary wires before mentioned. As the stationary wires are considerably the largest, any portion or all of the papers may be at once thrown over on to them, enabling you to take out any paper you choose, without changing the relative position of any of the papers. Below is the inventor's description.

DIRECTIONS FOR USING THE BILL-FILE.

Open it by pushing back the wire bows; stick the bills, etc., on the two front spindles, using the small middle spindle as a gauge; shut the bows back. If you wish to refer to any particular bill, letter, etc., throw the others over on the back of the wire bows till you come to it. In case you wish to put one on in any particular place, do it in the same way as when getting one off. If you wish to index them, put some stout sheets of plain paper on the file, and mark on the upper right-hand corner the letters of the alphabet, the names of different firms, or the names of the different kinds of papers on the file, such as bills, letter receipts, etc., whichever way you wish to index them. Now place your bills, etc., in between these sheets by throwing them over on the back of the bows, and opening it at the proper place. C. M. RULAND.

VIRGIL'S TREATISE ON BEES.

CONTINUED.

WELL, children, the bill of fare this month consists of very tough beef — parthenogenesis and pantheism. If you can't chew such articles, you may run away and play till next time. Can't apologize much for the dinner, because I'm not responsible for the victuals, but only for the cooking of them. Waiter, ring up the first course!

PARTHENOGENESIS.

One law thou wilt admire among the bees
That doth the man of wisdom greatly please;
They lead their lives the call of sex above,
Nor waste their bodies in debasing love; (1)
Nor bring forth offspring by the throe that grieves,
But gather children from sweet herbs and leaves. (2)
A king and little Romans they create, (3)
The halls and waxen cells repopulate.

AGE, AND CAUSES OF DEATH.

Often, indeed, on daily wanderings borne
Upon the jagged rocks their wings are torn; (4)
And oft beneath a load they give their lives,
And struggling fall, and fail to reach their hives; (5)
So great a passion for the flowers they bear,
For making honey such a pride and care.
Therefore how soon soe'er life's narrow bound
May interrupt them on their busy round
(Truly, not more than the seventh year is led), (6)
The race, by wondrous reproduction fed,
Remains immortal, and, through many a year,
Grandsires of grandsires on the rolls appear.
Though seasons come and go with good and ill,
The fortune of their house abideth still.

LOYALTY, AND THE RESULTS OF QUEENLESSNESS.

Not Egypt, furthermore, nor Lydia great,
Nor Parthian people, nor the Medan state,
So bow in humble reverence to their king,
Or to his throne in such allegiance cling. (7)
The king preserved, one mind is unto all;
He lost, all laws in broken ruins fall; (8)
Wide ope they tear the honey sealed so well,
And of the combs destroy each dainty cell. (9)
He owns the works, and him they all adore;
Thick they press round him with unceasing roar;
Upon their backs they raise him oft on high; (10)
And cast themselves before in war to die; (11)
For his dear sake grim death by wounds they meet,
Nor rue the loss, but trustful count it sweet.

FREE RELIGION.

Some have declared, by these examples led,
Part of the mind divine in bees is bred; (12)
Such wondrous signs denote a wondrous birth,
And sips of heavenly spirit not from earth.
For God, indeed, pervades, as they declare,
All lands and seas, and heaven's unbounded air; (13)
From thence, they say, the flocks and herds and men,
And all the beasts in forest glade and den,
Each one, as birth its mystery unrolls,
From God's own essence draws him subtle souls; (14)
And all things afterward, they say, 'tis clear,
Borne back again into their proper sphere;

All things dissolved, the sparks of heavenly flame
Return and merge again whence first they came.
No death exists; there is no place to die,
But only living through all space to fly;
To take one's lot where lofty heaven appears,
And join the harmony of starry spheres.

(1) He gets it a little mixed, our author does, but he is on the track of the truth. The worker bees are entirely free from sexual impulses, and that is the main thing claimed. Furthermore, reproduction without generation does exist in the hive under certain conditions. How much better is Virgil's stumbling pursuit of truth, in ancient twilight, than the stubborn ignorance of the modern editor of my volume of the poem! Just hear him. "This account of the production of bees here given by the poet, is justly exploded. It is found that no animal is produced without the concurrence of the sexes." If bees only were subjects of investigation, some minds would continue to deny; but examination of the aphides, or plant lice, has knocked the breath out of the negative party. Among these latter insects, parthenogenesis exists in a more perfect form than among bees, and is their usual mode of reproduction.

(2) The original reads, "*By mouth* they gather children." Observations in Virgil's time seem to have noted the royal jelly, and the fact that bees put it into the cells with their mouths. That the jelly is a product of digestion and secretion, they failed, seemingly, to find out. No theory was then open but that they gathered it direct from the plants they visited. Overlooking the fact that the queen-cell, before the royal jelly is put in, contains an egg, they probably regarded the jelly itself as nature's seminal fluid, out of which the larval queen sprang, like their own Venus from the foam of the sea — a fine illustration of how easy it is to get near the truth and yet miss of it. Had they examined the development of larvæ in the worker cells, they could hardly have missed discovering the existence and hatching of eggs; so I guess they stopped short of that point, merely noticing that a similar jelly was sometimes seen in worker cells. Or perhaps they saw the eggs, and thought they were little pellets of royal jelly rolled up by the workers.

(3) Calling the young bees "little Romans" is an extra good hit.

(4) Here there is exact agreement with good modern authority — that many bees perish simply by their wings getting too ragged to fly with.

(5) The death of these poor little fellows is pathetic, is it not? It happens usually, I believe, when night is approaching, or a shower. They have found plenty of honey, and, forgetting that they can not carry quite as much as they once could, they take all they can hold of it. A chill is creeping upon the air. They feel a little benumbed and stiff; and on trying their wings for home they settle to the ground. It is still colder down there, and they never rise again. Before warmth and brightness return to earth, all is over.

(6) The queen's usual term of life is three or four years, and its extreme limit probably about seven years, just as stated. It is comparatively easy to mark a queen and see how long she lives, but very hard to keep track of an individual worker. I presume, therefore, that the ancients made some successful experiments determining the age of queens, and then *guessed* that workers would live about the same, if no accident befel them. A worker's usual term of life is about six weeks in midsummer, and six weeks plus the length of time that he remains quiet in the hive at the other end of the year.

(7) There is some "stuffing" in both ancient and modern talk about bees' loyalty to their sovereign; but a good solid basis of fact is left after the stuffing is shaken out. I suspect that the Egyptians and Lydians, and the rest, reverenced their kings largely because they dared not do otherwise; while the regard of the bees for their queen is not enforced but voluntary.

(8) A little exaggeration creeps in here also. Utter recklessness and hopelessness is not reached at once when the queen is lost; that is, in ordinary cases it is not. If they have larvæ to raise another queen from, the disorder and hurry-scurry is soon quieted, and things move on tolerably well again.

(9) Careful economy in the use of stores, and great reluctance to uncap sealed honey, are prominent in well-ordered colonies. I rather think queenless colonies do sometimes get very reckless about such matters. The general rip and tear and ruin in a queenless hive comes, however, in an indirect way. Robber bees come in, and the inmates are too indifferent to fight them; and robbers tear combs to pieces, rather than take the trouble to crawl into deep cells. Wax-moths and other insects and worms come in, and little resistance is made. After awhile the bees take a short spasm of energy, and try to get rid of the worms by tearing away the combs; but they soon give up again. So matters go on until a hideous mass of rubbish and webs and worms is all that remains of the beautiful structures within.

(10) This, I believe, is correct.

(11) Perhaps some non-bee-keeping reader has already picked upon this as some of the stuffing that ought to be got rid of. I am not ready to consent. I think there is sometimes a genuine readiness to shield the queen by putting themselves in front. It is true, that when a frame is taken out, both queen and bees at times seem to take pride in behaving just as they do in the hive; and you pick up the queen without any one's so much as saying "why do ye so?" But let them be a little suspicious and excited, and you grasp at the queen and suddenly find workers in the way. Am I right about this, friend Root? You have handled many more queens than I.

(12) This doctrine is what is called Pantheism. It is still a very attractive form of belief for those who want a religion for the intellect, that can not by any possibility touch the heart anywhere. It is certainly very remarkable that the qualities displayed by bees should be chosen as a chief evidence that God is incarnated in all creatures.

(13) This strikingly shows how near beneficent truth and destructive error can come to each other. Few can deny that these lines sound plausible as well as beautiful. But, the God of the Bible is *present* among all things. The pantheist's God is an *ingredient* of all things. The God of the Bible is a person, and can be loved. The pantheist's God is scarcely more than a bi-chemical; and chemicals can neither love nor be loved. Pantheism is a very ancient doctrine; and the passage of Scripture found in I. Kings 19: 11, 12, is probably intended as a direct denial of it. Pantheism tricks us with a promise of future life; but anon we discover that our future condition is to be neither more nor less than what it was ages before we were born. Pantheism is a beautiful guess, unsupported. Christianity is a beautiful system with evidence behind it. Notice, also,

that Virgil avoids saying that he believes the doctrines as he recounts them. It is but just to remark that there are two forms of this doctrine. The milder and less objectionable ones tries to preserve some personality to God by considering him as the soul of the universe, and all things else as different members of his body; but, unless I am sadly astray, both forms tend inevitably to slide down into atheism.

(14) That is to say, when a snake is hatched from the egg, a small portion of God becomes an ingredient of him; and when a child is born, a larger portion of God becomes an ingredient of him. When the snake dies, the divine portion goes back again to its former place, as an atom of vapor goes back to the ocean; and when the child dies, the divine portion of him goes back, as a raindrop to the ocean. The ancients were inclined to speculate on man's having more than one soul, which probably accounts for the curious plural here.

LAST MONTH'S COMMENTS.

I did not for a moment mean to deny, or even ignore the method of reducing thin honey cited from A B C. I thought of it at the time, and was on the point of mentioning it. I was restrained by the thought that Virgil had mentioned only the fanning, and that, as commentator, I had best not branch off and talk all over the subject.

The reduction of thin honey to a condition in which it will keep is one of the most difficult parts of their work, although this particular difficulty is seldom thought of Witness the fact that thousands of species of insects visit flowers and gather nectar; and yet the hive-bee stands almost alone in the ability to keep it in any quantity. Several means are resorted to. First, the nectar of many species of flowers, for having poor keeping qualities, or for being too thin, is left to bugs and flies, *except when there is a dearth and they want a little for present use.* Second comes the means you mention. The bee, having filled his sac with the best nectar within his range, the urinary tubes commence drawing off the water of his blood, and throwing it away, while the water of the nectar in the sac passes through and makes good the loss. I judge from the plate in Cook's Manual that the urinary tubes of the bee are quite large compared with the size of the insect. For obvious reasons this process must come to a full stop at nightfall. To take its place comes the third means which I spoke of last month,—evaporation from their bodies, percolation from the sac going on as in the previous method. Fourth, the liquid is put in open cells that some more of the water may evaporate. A fifth means is also claimed. The principles of attraction, they say, draw the heavier portions to the bottom of the cell, while the more watery portion occupies the mouth, and is taken off by drones and others for current use. With all the means in operation they often get some of their precious sweets damaged, as one may readily notice by tasting of their unsealed honey after a few days of showery weather. Fresh rain water seems to be one of the greatest provocatives to fermentation.

I do not wish to be dogmatic, although, to save verbiage, I have left out qualifying terms in the above. Let the reader sprinkle in the perhapses and may-bes to suit himself. **E. E. Hasty.**

Richards, O., Aug. 8, 1883.

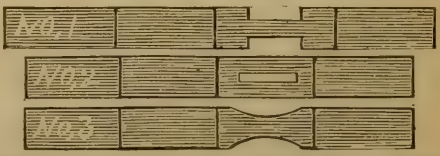
Friend H., I follow you without trouble, and indorse all you say until you come to number ten. I do not quite understand about the bees raising their queen "oft on high." I know that bees sometimes press around their queen and raise her up from the comb in a bunch or cluster. Perhaps this is what you and Virgil mean. And in the same connection I can answer your query at the end of No. 11. I have seen bees, after the honey-flow had ceased, seem furious when I attempted to take hold of their queen. She would run and try to hide, and great droves of them would follow after her and cover her up; and when I did finally get her out I was rewarded by getting my hand covered with stings. Colonies having a dash of black blood are most apt to do this; and if I remember correctly, full-blooded blacks sometimes resent any attempt to capture their queen.—In regard to my comments, no apology is needed at all. Your explanatory notes are all right just as they are, and we do not want any "verbiage." We know you, friend Hasty, and know that you are an honest worker to dig out the truth; and we feel so thankful for what you did get out, that we have no disposition to find fault with what you did not get; and if you did not get hold of the wrong thing now and then, you would be more than human; and if that were the case, a lot of us would be jealous of you. So go on, and do not forget that you are among a crowd of good, kind friends.

SOMETHING MORE ABOUT ONE-PIECE SECTIONS.

HOW LONG HAVE THEY BEEN PRACTICALLY IN USE?

SINCE Our Homes was written I have seen my attorney, and he has furnished me the following letter from friend Fiddes, for publication:

J. A. Osborne:—As you request me to give particulars regarding section honey-boxes made of one piece of wood, I will say that I gave a description in Gleanings for April, 1876, of a box that I then made. I know that it was the first that I ever heard of made of one piece of wood. I inclose you 3 patterns of boxes that I made of one piece. You will find them No. 1, 2, and 3; No. 1 I had used for three years before 1876; No. 2 I had used for one year before 1876; No. 3 I made in 1877. Nos. 1 and 2 are made of strawberry-case covers, ripped into narrow strips, and sawed at the corners half through, as described in Gleanings, much the same, or so near that it would take a smart man to tell the difference between the ones now made and patented by Jas. Forncrook and others; for when my little girl saw in the bee magazines the one-piece sections she said, "Oh pa! they are making your frames for honey now." The No. 3 is made of strawberry boxes, of one piece also, but much thinner stuff, which I now almost entirely make, as they please much better.



ONE-PIECE SECTIONS MADE IN 1873, 1876, AND 1877.

I do not know of any one in this place using the same one-piece sections but the Rev. Mrs. Cotton.

I made some 100 for her some years ago, and she made the rest herself after that; but she is now in Florida.

If I can find any more soon, I will let you know.

Centralia, Ill., May 11, 1883. ALEXIS FIDDES.

Friend Fiddes, we bee-keepers surely owe you a vote of thanks for your invention. I presume your letter which was given in our journal was what turned the attention of so many to this subject; and as it appeared so long ago in public print no one can very well say the matter was not fully understood by bee-keepers generally; and for one I feel like saying, "Many thanks."

We have also, in addition to the above, the following from friend McGonnell:

Friend Root:—I have not heard from my brother yet; he is in the oil regions somewhere, and hard to reach; but the latter part of the year after I sent him the plank, his shop burned down, and the coming winter he lost all of his bees, so it is doubtful if he ever made any of the one-piece sections. From what I can understand from your letter, Forncrook claims cutting the entrance in the plank before ripping up. Now, if that is the case, I think we have something of some value. I made sections in the spring of 1875, and I always cut the entrances in the plank before ripping up. I followed that plan up to the spring of 1879. I have the bits that I cut the grooves with yet, and I think I can furnish some pieces of the sections that I cut eight years ago. I have some that I cut 6 years ago, which I will send you. The pieces that I send you were on a hive that I had at the Pennsylvania State Agricultural Fair at Erie, in 1877. You ask me how much you would have to pay me besides my expenses to come and make deposition to what I know about the case, to which I shall say, nothing besides expenses, which would include railroad fare and board while there. I would not ask that if I could afford it. If what I know is of any value to you, let me know, and I will do all I can for you. J. MCGONNELL.

Waterford, Pa., Aug. 13, 1883.

Many thanks, friend M., for the facts you give, and also for the kind offer of services without any charge for your time. Should we need you, I will most gladly avail myself of your offer. Mr. Forncrook does not claim any thing in particular; but it is the combination; and the entrances for the bees without being cut clear across the bottom-piece is one of the special things enumerated.

* * *

MRS. LUCINDA HARRISON.

TAKING BEES TO CHURCH; HER TRIP TO NEW YORK CITY, AND WHAT SHE SAW.

BRO. ROOT:—I never take my bees to church with me; but I certainly should if I left them during the swarming time, with no one to care for them. I know a bee-keeper in a small town who persists in going, and the services are hardly commenced before some of his neighbors come in and inform him that his "bees are swarming." The congregation nudge one another, and with knowing looks whisper, "His bees are swarming." This disturbs and diverts the attention of the audience; and would it not be as well for him to remain at home four or five Sabbaths, or take turns with other members of his family?

A minister came to me last summer saying, "I'm afraid I shall lose my bees while we are away at church; we all go, and I'm not willing that any one shall stay and watch them." I told him to get Jones's queen-guards, and put them on while they were at church, as he had but five colonies. He did so, and told me since that he lost none.

I'm in New York City, and all the way here I was watching for bee-flowers, and did not see enough to make a bouquet until I reached New York State, where goldenrod is blooming plentifully. There is a drought all the way, and the corn is small, some not more than a foot high, while again it is in tassel. While it is of good color, and very clean, it does not appear as though it were going to have *ears*.

When I went into the "Ladies' Waiting Room," at Indianapolis there was a lady there who had a dog tied under her seat. He was a white bull dog, with a stumpy tail. He had been taught his manners, and was very well behaved, and seemed to think it was his duty to protect his mistress. I asked the lady if he traveled with her in the passenger car. She said, "Oh no! He was tied in the baggage car, and I had to pay for him." Poor fellow, how lonesome he must have been out there! I took the cars pretty soon again for Cleveland; and when we stopped at a town, two young men came into the car cursing and swearing. They had been playing with "brain thief," and he had stolen almost all the brains they had. When the conductor came along, I told him that my ticket was "1st Class," and I didn't think I was getting what it called for, when I was put into a car with drunken, profane men. He quieted them, and I noticed that they occasionally stole a glance at me. How much better the dog would have behaved than those drunken fellows!

When we came through New London, Ind., I saw a very pretty home, and I thought I caught a glimpse of bee-hives as we bowled by. Do any of the juveniles live there? I hope so; and these were all the hives I saw on the journey, though I looked for them all the time. We came pretty fast, though; from Cleveland to Buffalo there is a double steel track. Why! the tops of the rails are as bright as our knives and forks. What pretty homes you would have, if you could grow flowers as beautiful as those in Cleveland park on the lake shore. I hope our bee-children will some time enjoy as delightful a ride as I had from Cleveland to Buffalo, with the pure lake breezes coming in at the windows, free from smoke. MRS. L. HARRISON.

New York, Aug., 1883.

Thank you, Mrs. H., for your good advice in regard to going to church during swarming time. I presume the children know it as well as the older people, that where a person wants to do any thing he can generally find an excuse for doing it. If any one wanted an excuse for staying home from church, I presume the need of looking after the bees would make a very good one. But suppose, children, a person wanted an excuse for going to church when he knows very well that he ought to be at home. How would it be then? Our religion ought never to lead us to neglect duty, for the whole spirit of it should be right to the contrary.—I am very thankful that Mrs. Harrison gives the idea of Jones's entrance-guards. I think very likely they would control the bees, until church is out, any way.—Another thing: I do not believe I should have very much fear but that the boy or girl would prosper who loved God and his holy sanctuary more than they loved their bees.—I am very glad, Mrs. Harrison, that you had independence and courage enough to talk right out to the conductor. If more people would talk right out and remonstrate about these things, conductors, as well as passengers, would soon be under the necessity of doing something.

◆

FEEDING EXTRACTED HONEY TO GET THE BEES TO STORE IT IN BOXES.

A CAUTION.

IT is very dry here. Bees are not doing any thing just now, but trying to rob one another. I tried to feed back some extracted honey to one hive, to get them to store it in boxes, but the robbers came and took the hive by storm, killed the bees, and cut the combs out of the frames.

WILL A. HAMMOND.

Richmond, Va., Aug. 10, 1883.

Friend H., your experiment turned out just about as I should have expected, unless you took very great care and watched the matter closely. We are having quite a drought here now, and the bees are getting in a mood where it is a little dangerous to let them get started, especially on pure honey. If you are going to feed to get them to store it in boxes, or even to get the boxes filled, you want to choose a strong, vigorous colony—one about whose entrance a robber would hardly dare buzz. The entrance even then should be made pretty small. The hives should be so tight that no crack or crevice can give outsiders a "sniff" of exposed honey on the inside. While I think of it, there is something queer about this. A dish of honey in the hive will attract robbers, while the same quantity in the combs, even though it be unsealed, will occasion no disturbance. I have used a Simplicity hive made three stories high, for the purpose, or a chaff hive will do very well, if you have your feeder in one side of the upper story, and the frames of sections to be filled, on the other side. In the latter case you will have to be careful that the bees do not build combs around or in the feeder. The cover to the hive must fit so closely that no bee can by any possibility squeeze under it. The lower story should be pretty well filled with brood. In fact, I would remove all the combs of honey, and leave only those that contain brood. Put the frames of sections in the place of those you took out, if you choose. Having it all fixed, now commence feeding moderately. Feed at dusk, after the bees have stopped flying, and be careful about opening the hive at any time during the middle of the day. If a single bee should dodge in under the cover, get his fill of honey, and then slip out of the entrance, it would be pretty sure to start a muss. Do not let any single bee do this. I suggest that you feed moderately at first; because if it comes on the inmates of the hive too suddenly, they will gorge themselves with the honey, in which condition they are unfit to repel robbers; and a good strong colony may be injured, if not destroyed, in the way in which yours was. However, it can be done safely if you work slowly and carefully. Take one colony first; and when you make a success of this one, commence again with the others, and so on. I have been thus particular, because many times quite a profit can be made in feeding back extracted honey, especially when comb honey is worth 18 to 20 cts., and extracted 12 to 14. Perhaps it were well to add that, before you can get much honey in the sections, you will have to feed enough to get the brood-combs crammed full, and bulged at the corners and ends of the frames. These remarks, of course, are for localities were they have a drought, and no honey is coming. Where bees are gathering honey, of course you do not want to draw their attention off from it, by feeding them in the hive.

◆

SOMETHING FROM OUR FRIEND GEO. GRIMM.

HOW MUCH VENTILATION WHEN BEES ARE STORING HONEY, AND OTHER MATTERS.

FRIEND ROOT:—As I do not want to make a full report (accurate records and inclination both lacking), but still don't want you or any other bee-friend to believe me lost, I will write you a letter, and you may print *that* if you choose. I have never kept an accurate account of all the details of my bee manipulations. It is sufficient for me if I know at the end of each season exactly what my net profits are; and this I usually do. I work my bees for profit exclusively; and during the busy humdrum of the summer season, bee-papers are quietly laid aside, with scarcely a glance for things of importance. With the sole object of profit in view, you will hardly wonder that reports, discussions, theories, and advice to beginners, do not interest me. True, sometimes a very bad error, a one-sided view, or theories and deductions entirely contrary to my experience and observations, will almost draw out an answer; but I always think better of it, and let others judge for themselves, as I do.

How long this letter will be, or how many points I shall bring up, now that I am started, I don't know; but one thing I will endeavor not to forget, and that is a criticism on *you*. But wait in suspense a moment till I tell you a little about how things progress here.

Last season I wintered in over 500 colonies; just how many, I don't know; but it was over 500. Outdoors in chaff hives, I had 35. In the spring, when I brought those in the cellar to their summer stands, I found dead in one cellar eight; in another, three; and in the other, one; a total of twelve, or about 2 2-5 %. I lost about that many more during the spring. Those outdoors did not do as well, owing in part, however, to lack of seasonable attention in the fall. There were, if memory serves me right, 17 weak or dead (mostly dead). And now right here let me tell you that, though I do not, as a rule, go much on luck, I am sometimes inclined to believe that, as a matter of fact, that element enters frequently as an important factor, and that I am frequently more "lucky" than prudent. Let me explain:

It happens to me of late every year, that about this time business demands my attention in Dakota; and I am frequently unable to return till within a week or two before the time when bees should be cellared. I can not, therefore, give them the attention and winter preparation considered so essential to successful wintering. What feeding there is to be done is done late, and in a rush. Brood being scarce, queenless colonies often go in with the rest; and weak ones are rarely doubled up. Last fall my bees received no attention whatever. I saw that they were supplied with honey sufficient to carry them through to spring; then I hurried them into the cellars. Those in chaff hives needed considerable feeding, but it was too cold; so I watched my chances during the winter. To this winter feeding the loss is probably in a great measure attributable. And yet, in spite of these facts, those in the cellars wintered *well.* They were strong in spring, even stronger than usual; and had not the severe and protracted cold weather during spring checked brood-rearing, they would have eaten up their stores far too soon for my satisfaction.

Of course, summer management has a great deal to do with the condition they are in in the fall; and raising comb honey, as I do, leaves them in better shape than raising extracted. Yet I feel that, as with many others, a great deal often depends upon luck; and it would not surprise me if some of our most successful winterers would some time come out at the "little end of the horn." I make this prediction now while my record is good, so that if, at some time, bad luck does overtake me, you will know the cause of it. The fact is, that, though we know the requisites to average successful wintering, or think we do, we are not always able to do that which we wish to; and often, too, are careless when we could do better.

Speaking of carelessness reminds me of your answer to Mr. Langstroth's letter; and I feel, with due deference to you, like offering an apology to Mr. Langstroth for differing with one so pre-eminently above me in knowledge and experience; and yet, if I understand him rightly, I agree rather with your answer. It is impracticable with me; it would take too close watching; I am too careless, perhaps; have too many to look after, and scattered too far over the country; a very heavy flow, or a sudden dearth of honey like this year, would demand quicker attention than I am always able to give them; besides, I am convinced it *doesn't pay.* The bees do not work as well, or seal as quickly, near the opening. The latter may not be objectionable to some; but to me it is, for I want my honey sealed before extracting. In fact, I never extract during the busy honey season, but simply give more room. I thank Mr. Langstroth for his kind recognition of my father, Adam Grimm; the more so, since I remember so well the high estimation my father had of Mr. L. to the bee-keeping world He is right when he says my father condemned as inferior the hives used in his mother country. In fact, I have frequently heard him remark that *no* hive that he has ever tried (and they were many) could nearly equal the "Langstroth." And as to bees above the tops of the frames, and plenty of air above, I will say this: He was quick in his manipulations, and cared little for labor when connected with bees; but he kept the cover raised for the sake of *ventilation,* and allowed openings around the honey-boxes for that purpose. But he did not do that in later years, and I'll tell you why. When he got so many bees, it became impossible to get around in time to prevent building inside of the cover. That this could not fail to happen in those days when the honey-flow was sometimes so great that the bees built comb and filled it with honey *outside the hive* in the portico, you will readily understand; and when we got to lifting off the covers, and found every space between boxes and cover filled with honey, and dripping, well, it was provoking; the blessing was too great.

But that was not the only reason why he shut down. In those days we used the glassed boxes, six to the L. hive, and the bees in an ordinary honey season would not seal as well near the glass, especially when the cover was raised. So he first reversed his boxes, and placed them glass inward, and found that *they sealed better;* and finally he also shut down the bees out of the cover, and was better satisfied.

For my part, I say as you do, friend Root: Bees work better where every thing except the entrances is tightly closed and dark. Where ventilation is needed, shade is all that is necessary. The little extra work of lifting off a cover is well paid for.

A while ago I read an article from Mr. Heddon upon overstocking, and somebody's reply. I wanted to answer then, but did not get time. It is an important question to those bee-keepers who are obliged to keep a number of apiaries; and when I get time later along I will "chip in" a trifle to the general fund of experience for GLEANING's readers. Perhaps I shall to some extent draw upon my father's experience as well as my own.

Well, now, I forgot that I promised to lecture you, and my letter is already too long; but, wait! it will keep and some day you'll hear it.

A word about the season, and I will shut up. It is poor. White clover, medium; basswood, almost a failure. But still a fair credit balance will be chronicled at the end of the season. GEO. GRIMM.

Jefferson, Wis., Aug. 13, 1883.

Now, friend George, that is really tantalizing. You start by saying you are going to criticise me, and keep me shaking in my shoes until I get to the end of the article, and then very coolly declare you haven't time, because your letter is too long! There is one satisfaction in it, after all; and that is, that you will have to write again for us; because if you do not, ever so many will be inquiring what it was that I had done that was wrong. I am very much obliged indeed for the results of your experience in regard to keeping the apartments closed where honey is being stored. This is indeed a most important matter, and I hope honey-raisers will give us their experience quite freely in the matter. I hope that our good friend Mr. Langstroth will not feel hurt at all, even if we have given our objections to his plan so freely.—A word about succeeding by luck, as you express it: I know that we often succeed because we have neglected something; but, of course, you would not recommend developing that system of management.

DRONES THAT CAN STING.

SOMETHING NEW UNDER THE SUN.

I SEND you a cage containing bees. Look at them, and see what you make of them. We have been taught that drones could not sting; but if there are not some bees in the cage that have drone heads and bodies, with stings, then I am mistaken. I also put in a few worker bees from the same hive. There are some of them that have worker bodies with drone heads. They are from a young queen whose bees are just hatching. I found them out on the ground, and saw bees dragging them out of the hive about noon to-day. It seems that some of them have queer marks. I don't think that I ever saw any with the light spots, or rings, so near the end of the body before. I have killed 2, as above, and found stings. I could see them plainly, but could not see any proboscis, or organ for gathering honey.

M. L. SPENCER.

Little Genesee, Alleg. Co., N. Y., Aug., 1883.

Friend S., you are right in one respect at least. The bees you send have drones' heads and the worker bees' sting, and some of them have a queen's body. But they are nothing more than a queer malformation, or freak of nature. The queen is a curiosity indeed, and I would advise you to keep her, to furnish specimens of these "three in one," for the benefit of entomologists and others who may be interested in such matters. The most lively one in the cage looks like a very fair queen, until you give her a very close inspection; and then you see she has a drone's head, and the three distinct bands of an Italian worker. Some of these have the fourth and fifth band, something after the fashion of a hybrid queen. We will forward to Prof. Cook the specimens you send, for further remarks, if he thinks proper.

A "REPORT ENCOURAGING" IN A DOUBLE SENSE OF THE WORD.

A WONDERFUL INVENTION COMMUNICATED BY AN A B C SCHOLAR.

DEAR friends, I may be mistaken, for I have been mistaken many times; but the closing part of the letter below seems to indicate an advance in queen-rearing beyond any one step heretofore made. As my eyes ran over the pages, my memory ran back at galloping speed to the time when I proposed doing the same thing by having the queen-cell in the hive covered by a wire cage. Those who have taken GLEANINGS since its infancy will remember the reports I have given on the subject. Quite a number of the queens hatched were kept caged until they were six or eight days old, then allowed to fly, and a few of them were fertilized, and caught before they got back into the hive. They were introduced immediately, and did good service. The principal trouble in the experiment was the mischievous habits of the young bees. They will reach through the cages and get the queens by the leg or wing, and thus worry them. And they also worried them after they came back from their excursion, unless they were watched constantly. Now, then, the friend who writes below tells us of dispensing with bees entirely, by a bold stroke. But we will let him tell it.

The honey season has thus far been very good here. From my five colonies in the spring I now have 14, and have taken off 391 lbs. of honey, about half comb and half extracted. Several about here have taken over 100 lbs. per colony. I visited Mr. L. D. Ormsby, of Pierrepoint, on Saturday last, and found him the same genial, good-hearted young man as usual. He has 97 swarms at present, and about 3000 lbs. of honey, two-thirds of which is comb. Mr. O. is a live, wide-awake bee-keeper, and will make a big report this fall.

SOMETHING NEW ABOUT QUEENS.

Some time ago friend Phelps had some queen-cells about ready to hatch, which he carried in the house, and put under some tumblers. They hatched out; and when I saw them they were one or two days old, and seemed to be taking care of themselves all right. I suggested to friend P. that he let them fly some fine day, and see if they would get fertilized, and return to the tumblers; so one fine morning they were turned loose. They flew away, and were gone a few minutes, and returned to the window, both fertilized. Now these two queens had been entirely alone from the time they were hatched until they were fertilized. I wish I could tell you more about them, but I can not at present. Mr. O. S. Bugbee has one of them, or did have; perhaps he will tell us more about the one he has. The other, I believe, was lost.

H. H. PEASE.

Kingsville, Ohio.

Now, friends, how many of you will hatch queens, and get them fertilized, without being put into the hive at all, before another number reaches you? The principal difficulty will be in keeping these young queens at the proper warmth, without any attendant bees. They must also be fed on fresh honey, right from the hives, and some should be ready for them when they first get home. This will make it necessary to look out for robbers where the honey-yield has ceased. I once thought of letting the queens loose, one at a time, in a hive of drones. The drones would not worry them much when they returned; but as drones would not protect themselves from robbers, I was obliged to look for a location where no robbers would interfere. Of course, to have queens get fertilized and get back quickly, we should want a great army of choice drones flying at the time. One man could easily look after 100 queens under their respective tumblers. I presume it would make no difference if they got into the "wrong box," providing the manager took care they did not get to fighting. After a queen returns with marks of fertilization, she is ready to be introduced at once, where a queen is needed. Perhaps it would do to ship her at once with a lot of young bees taken from some very gentle queenless colony. Now, who will report in regard to this wonderful short cut?

DO RAILWAY CARS GO 60 MILES AN HOUR?

INCONTROVERTIBLE SUBSTANTIATION OF THE MATTER.

I HAVE just read Doolittle's article on bees flying 90 miles per hour. In your remarks you seem to doubt that railway trains ever do run 60 miles per hour. I have had over 15 years' experience as telegraph operator, and in the employ of several of our principal trunk lines, in positions where I was *obliged* to keep a record of time and speed of trains. I most cheerfully corroborate Mr. Doolittle. There are one or more trains on each of the great trunk lines of the United States (N. Y. C., Erie, L. S. & M. S., B. & O., etc.), whose card time is 45 miles per hour; this *includes* stopping at stations. It is *impossible* to make this time, unless every advantage is taken of every straight piece of track that is well ballasted, and safe every way; then they do run 60 miles and over per hour. I have ridden a mile a minute many a time. If you want to do something that is real exhilarating, sit on the front of a locomotive; sit on the pilot, and let your feet hang down; hang on to this brace. Here we go; you won't fall off—you can't; the wind holds you fast to the boilerhead. You can scarcely raise your eyelids; the fence is a gray streak; the telegraph poles look like the teeth of a fine comb. What is that ahead? Smoke! a train! Oh! why doesn't he stop? Will any one know me when I'm gone? Swish! there! it was on the side track, after all. There, Johnnie has shut her off. Hear the valves click, right in your very ear. On go the air-brakes. Why! he is pulling the engine out from under us; hang on. Now we have stopped, sure, and there are Ida, Edith, Laura, Maude, and the rest of them. You laugh, and laugh; you *can't* stop laughing. Why, Mr. R., what is the matter with you? Small boy, *sotto voce*, "He's drunk." Yes, drunk with excitement. You won't forget it for many a day. J. J. LAWRENCE.

St. Mary's, Ohio, August 8, 1883.

THE NATIONAL BEE-KEEPERS' CONVENTION TO BE HELD IN TORONTO.

Some suggestions from friends Poppleton, Cook, Jones, and others.

ARRANGEMENT FOR REPORTS FROM VICE-PRESIDENTS, ETC.

OUR friends will notice that the following letters were addressed to different individuals, and the whole of them sent to me for publication. I think the idea an excellent one, to have some previous arrangement in regard to these reports from different States, and I am sure that our people will all turn in and help in regard to the matter of furnishing statistics, or whatever other matter may be asked for.

Friend Jones:—What is the arrangement about reports from vice-presidents of our society at its next session? Are they expected to present reports from their respective States, or was the report from the Committee on Statistics intended to take the place of any from the vice-presidents? I find the statistics business a difficult one to do much with. Last year I issued a call through the journals, asking bee-keepers in our State to send me reports so I could make some kind of a report to the society; but I received only 15 or 20 reports from the entire State—just enough to give some idea of the season's operations, but not enough to be at all valuable. Now, if it is the intention to have vice-presidents report, would it not be a good plan for your ex-committee to have published in the different bee papers between now and the time of meeting of the society, a request to all bee-keepers to send reports to their respective vice-presidents, giving, at the same time, a list of the vice-presidents with their P. O. address, and a short list of questions to be answered. These last to be just as few in number as possible. I simply suggest this matter to you, hoping that some course will be pursued that will secure more uniform and more general reports. We are very much afraid we shall not be able to get to Toronto this fall, but will do so if possible. I wish you would keep me posted in regard to excursion rates, etc. O. O. POPPLETON.

Williamstown, Iowa, July 16, 1883.

Prof. A. J. Cook:—I think that the way friend Poppleton suggests is the best method of getting statistics. It is a hard matter to get a satisfactory report. I inclose friend Poppleton's letter; add any suggestions you think would be advisable, and forward all to friend Root, who, as secretary, can prepare the questions and see to their having publicity through the journals. This should be done at once, as the time is now very near. Prospects bright for a good time. D. A. JONES.

Beeton, Aug. 4, 1883.

Friend Root:—I like this. I would also suggest that each vice-president be requested to correspond with reliable, candid apiarists, in the different parts of his State, as to season and crop. He can thus give a fair judgment. A. J. COOK.

The names of the vice-presidents as we had them at the Cincinnati Convention last year are as follows:

VICE-PRESIDENTS FOR 1883.

A E. Manum	Vt.	J. D. Davis	Mass.
G M. Doolittle	N. Y.	J. A. Vandervort	Pa.
J. Hasbrouck	N J.	F. Della Torre	Md.
J. L. Bowers	Va.	Dr. J. P. H. Brown	Ga.
W. S Hart	Fla.	Dr. O. M. Blanton	Miss.
Paul L. Viallon	La.	J. T. Wilson	Tenn.
Rev. S. Johnson	Ky.	Dr. H. Besse	Ohio.
Prof A. J Cook	Mich.	J. M. Hicks.	Ind.
Dr. C. C. Miller	Ill.	Christopher Grimm	Wis.
O. O. Poppleton	Iowa.	E. M. Hayhurst	Mo.
Peter Scoville	Kan.	W Muth-Rasmussen	Cal.
W. K. Marshall, D. D	Tex.	Judge Harriman	Ark.
James B. Mason	Maine.	Harry Hammond	S. C.

Will the above friends please take notice of what is expected of them, as indicated in the letters above? In regard to the questions mentioned, we do not know any better ones to suggest than those used by friend C. C. Miller on page 26 of our last Jan. No.

SUGGESTIONS TO THOSE WHO MAY BE DESIROUS OF VISITING NIAGARA FALLS.

Friend Ellis has kindly furnished the following facts, which we condense from his letter, for the benefit of those who wish to take in Niagara Falls, in going to and from the Convention:—

It is 35 miles from the Falls to Toronto by boat, and 15 by rail. Those crossing the river at Ft. Erie, and taking the Mich. Central from Buffalo to Niagara, will have a fine view while passing. If you come by the Suspension Bridge, from New York, you will cross that to Niagara Falls town, two miles from the Falls. When at Niagara Falls town, Can., you can take the Grand Trunk road to Hamilton, and then change cars for Toronto; or you can take the Mich. Central to Niagara, then boat to Toronto. The Whirlpool is one mile below the Falls, and one mile from the Suspension Bridge. A word to the wise: If you wish to go sight-seeing at the Falls, always pay your money before you go, or you will pay more than you expect to when you come out. I do not wish to say that there are no honest men there; but if you do as I say, you will be one to say that you were well and fairly treated while here.

WILL ELLIS.

St. Davids, Ont., Aug., 1883.

Friend E., we are very much obliged to you indeed, and many will doubtless profit by your kind hints.

Juvenile Gleanings.

AUG. 15, 1883.

Contents of this Number.

Bees, etc., in Michigan......484
Beginner's Troubles........500
Cars, Speed of.............. 494
Convention, Toronto........495
Convention Notices.........499
Drones that can Sting......493
Editorials......................496
Fdn., Fastening..............486
Forgettery.... 500
Frames, Metal-cornered....485
Gapes in Chickens...........506
George Grimm 492
Harpoon 486
Harrison, Mrs.................491
Hemp............................504
Hives, Decoy.............499, 500
Hives of Brick................505
Hiving-box, Basket........ 506
Honey Column...............499
Honey, A Place to Keep.....506
Honey, Poison 484
Honey, Feeding Extracted.492
Humming-Birds.......... ..504
Kind Words...................510
Labels 497
Letter-clip, Ruland's........488
Locality, Choosing a.........484
Manitoba......... 498
Maples for Honey............503
Milkweed for Honey........512
Missing Goods 505
My Neighbors.................481
Paul Price......................483
Pease's Invention............494
Queens do Sting 487
Queens in Winter............511
Reports Encouraging.......498
Scholar one Month old......486
Sections, One-piece..........490
Shorthand, Juvenile.........503
Smoker Fuel..................506
Starvation.....................512
Sunflowers.....................505
Swarm, Artificial........... 512
Tobacco among Juveniles..502
Tobacco Column.............509
Victoria Fields......... 487
Virgil... 488
Water-lily......................505
Wholesale Rates.............497

Stand fast, therefore, in the liberty wherewith Christ hath made us free.—GAL. 5: 1.

We will pay 10c each for March GLEANINGS for 1881.

Remember the date of the Toronto Convention, September 18, 19, and 20.

We have as yet received nothing in regard to half fare to the National Convention at Toronto. We hope to be able to state definitely in regard to it in our September issue.

WAX.

Wax is now offered so plentifully that we can pay only 28c cash, or 30c in trade. As quite a little which we have in stock cost us 32 and 33c, we can not sell for less than about 34, and save ourselves.

FOUNDATION.

We have foundation now in stock, ready to ship by return mail, express, or freight, and are very glad indeed to see orders, either large or small. For that matter, we are now prepared to fill orders for almost any goods.

HONEY.

We are well supplied with a nice article of extracted honey that cost us about 9c per lb., and we could not very well use any more unless we should extend our trade by an offer of still lower prices. If any one should have any nice extracted honey that he could deliver to us as low as 8c per lb., we could perhaps use it, but would not care for any more at a higher rate.

Lest some of our readers do not have our Jan. No. on hand, we reprint friend Miller's proposed method for sending in statistics on a postal card:

F. Torrens, East Liberty, Pa.
21 colonies in fall of 1882.
18 " " spring of 1883.
25 " " fall of 1883.
400 lbs. of comb honey.
300 " " extracted.
3 " " beeswax.

A SUCCESSFUL IMPORTATION.

Day before yesterday we received 50 imported queens, of which 48 were in splendid condition. They were all introduced by the Peet cage, and at present only two have been lost. Two of the 48 were laying the next morning, which is something I have never known before; viz., a queen that had crossed the ocean to be found laying within 24 hours, or less, after being put in the hive. Present orders would take almost every one of these queens at once were it not that the greater part are for select, or $6.00 queens; and there are not more than twelve in the whole 48 that will come up to the standard. However, another 50 will be in shortly, and still another 50 soon after. Unfortunately, the greater part of our orders are for best grade. So we can send you a fair queen at once if you want one.

FOUL BROOD.

Twice lately I have found specimens of foul brood lying on the table where the mail is opened, near an open window. If one of our bees should have happened to come and get a sip of it, where do you suppose our apiary would be, kind friends? Now, please do not send any more foul brood to me. I am not a judge in the matter; and if I were, I should not want it sent here. Mail it to friend Muth, who knows more about it than I ever expect to (at least I hope so), and he will tell you whether it be real foul brood or not.

OUR NEW FACTORY.

The floors are down, ceilings mostly in place, and the masons are at work to-day plastering. The men who are to put in steam arrangements for warming both our old and new factory are expected here this week. Instead of doors to the rooms, we have passageways under broad brick arches, so that the crowds of clerks can pass to and fro without getting in each other's way. Mr. Gray has been away up to Saginaw, hunting up pine and basswood lumber, and we are now making preparations to enable us to be ready for the siege when it opens next season.

MAPLE SUGAR.

We purchased so largely last spring that we have quite a quantity of maple sugar on hand unsold. We now offer the best for 12c; next best, 11; fair, 10, and poorest, 9c. As we sell any of the grades one cent less where a barrel of about 200 lbs. is taken, this last grade costs only 8c. It is pure maple sugar, but rather dark. This grade answers nicely for feeding bees, for the purpose of keeping up brood-rearing, or rearing queens, etc. All you have to do is to lay lumps of it on the tops of the frames. It will be taken up quickly, and yet the bees are not so eager for it as to incite robbing, as almost any kind of honey is sure to do. Very nice maple molasses, in tin pails holding 3½ quarts, 90c. As this was soldered up just as soon as made, it should be little if any inferior to that fresh from the camps.

BLACK AND HYBRID QUEENS FOR SALE.

Inasmuch as it hardly pays to buy and sell queens for less than a dollar, we have decided to let all those who have blacks or hybrids that they will furnish at a uniform price of 25 and 50 cents each, to do so, under this head. It will also be an excellent exercise for those who have not had experience in shipping or introducing queens, to try their hand at it in these. Here is what one friend says:

> I intend, within the next two weeks, to Italianize 20 colonies of black bees. Would you like to purchase my 20 black queens? If so, at what price? Will send them to you if you want them.
>
> J. McKinstry.
>
> Nelson, Lee Co , Ill., Aug. 12, 1883.

Who comes next? Here is one already:

> Do you want any black queens? If you do, let me know at once, and send me ½ dozen shipping-cages, with sugar in, to ship them in to you.
>
> H. H. Monroe.
>
> Waterton, Luzerne Co., Pa., August 13, 1883.

JONES HONEY-PAILS.

It is really amazing to see the trade that is springing up in these pails. Not only is our tin-shop going full blast on them, but since orders have mostly ceased for fdn., we have turned our wax-room into a tin-shop, and taught the girls the mysteries of melted solder instead of melted beeswax. Orders of from 300 to 500 are matters of almost daily occurrence, and to-day we received one for 1000 pails, and one inquiry for our best figures on 10,000. We still make the Dadant pails where wanted; but the covers shut so much more closely on the Jones pails, and there is no possibility of the honey leaking around the edges, while they are more easily opened than the Dadant pails, that we have mostly ceased making the latter. Jones pails can also be sealed with wax, while the Dadant pails can not.

WHOLESALE RATES AND COMMISSION.

So many are the applications for goods at wholesale, or goods on commission, that I have decided to make a general answer here. We have no goods to send out on commission at all; our prices are not sufficient to warrant it. Neither have we, as a general thing, any better rates to give than those in our price list. On many of the goods we make, there is no wholesale; that is, if you want to sell the goods, your only way is to get machinery and make them. This applies to bee-hives, fdn., and other goods of like nature. If you want to sell fdn., you will have to get a mill and make it. We give wholesale rates on extractors, knives, smokers, etc., but the conditions and terms are all given in our price list. We can not give any better prices unless you want to purchase in larger quantity than we have there mentioned. Where a customer buys largely of a certain line of goods, and but a few of another line, we sometimes, in consideration of the large amount of money he has paid us, given him small shipments at 10s or 100s rates. But as a rule we do not deviate to anybody from the terms and conditions laid down in our price list.

Just as we go to press, we hear of excitement north, south, east, and west. The saloon-keepers in many of the large cities have formed associations, and drawn up resolutions declaring they will sell what they choose; and in St. Louis we understand they have called on business men in general to unite with them in their scheme of doing away with the Sabbath entirely, or having it a day of drunkenness and debauchery. They do not state it just in that way, but they do complain of having restrictions that should prevent any from so doing if they choose. Of course, the authorities are considering the best way of bringing these rebellious citizens to their senses, and it is possible that bloodshed may ensue. The excitement is not altogether in large cities either; for in our own peaceful, quiet suburb of Medina, a new saloon has been opened right across the track from us. They painted the house all over, and put new porches around it; and when it was completed they commenced by giving beer to whoever would take it. This is going on while I write, if I am correct. I am glad to say, however, that not a very brisk patronage is seen about, even if it does not cost any thing. I have been over to see my neighbor, and remonstrated; and as remonstrance did not avail, we are about to try something else. What are you doing in your town, my good brothers and sisters?

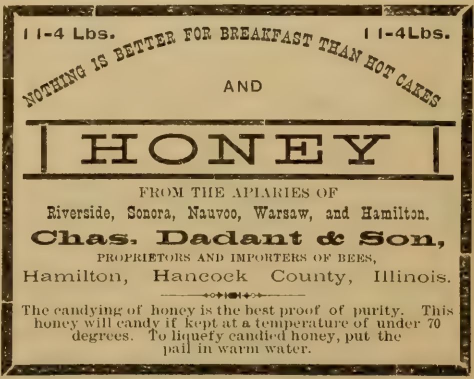
ARTIFICIAL PASTURAGE.

In our locality there are only three plants that can be sown at this season so as to produce honey. Buckwheat, if sown now, will produce a nice crop of blossoms, and may ripen grain. Seven-top turnip is just in season, and we are able now to furnish fresh seed of our own rearing at 5 c. per oz., or 50 c. per lb. By mail, 18 c. per lb. extra. Bokhara, or sweet clover, if put in good rich ground, will make a nice growth this fall, and produce a good crop of honey next season. Both the sweet clover and turnip should have good deep rich soil, or the frost will pull them out during the winter. A sandy soil, or one underdrained, will be better on this account. Last spring our seven-top turnips were thrown out of the ground so badly by the frost that the smell of their decaying roots was, for a few days, decidedly a nuisance.

LETTERS WITHOUT NAMES OR ADDRESSES.

Our mailing clerk says the matter is getting to be worse and worse. A great heap of letters is now before us without names or addresses. Is everybody getting in such a hurry, or what is the matter? I can not think of any other remedy, except to have your name and address printed on your stationery, and I do not know but that I shall keep on talking about it until more of you adopt something of the kind. I presume gummed labels would not do, because you would forget to put them on. Even where they are written on, they are often so badly written, and the counties are so often omitted, that we have a regular standing quarrel, almost all of the time, with some one or other, because valuable goods have gone to the wrong place simply because of these omissions, or because your name or address is written so poorly that the average clerk can not possibly make it out. What shall we do in regard to this one great source of trouble and trial? I really believe I would print the addresses free of our 150,000 customers, if I could be sure they would all use them every time they write to us.

Perhaps it may interest our friends to know what kind of a label Chas. Dadant & Son use, as I suppose it is generally known that they sell honey in exceedingly large quantities, and they were some of the first to introduce its sale in tin pails. Below we give a copy of one of their labels, only it is reduced in size, and printed all in one color. They have the border red.



1 1-4 Lbs. 1 1-4 Lbs.

NOTHING IS BETTER FOR BREAKFAST THAN HOT CAKES

AND

HONEY

FROM THE APIARIES OF

Riverside, Sonora, Nauvoo, Warsaw, and Hamilton.

Chas. Dadant & Son,

PROPRIETORS AND IMPORTERS OF BEES,

Hamilton, Hancock County, Illinois.

The candying of honey is the best proof of purity. This honey will candy if kept at a temperature of under 70 degrees. To liquefy candied honey, put the pail in warm water.

CANADA ONLY. Dollar queens by return mail.
H. Smith, Box 102, New Hamburg, Ont., Can.

Reports Encouraging.

I WINTERED 18 colonies without loss, on their summer stands; sold two; commenced with 16 colonies; have increased so far to 41 fair to good colonies, all Italians and hybrids; have taken so far 400 lbs. honey, mostly extracted, besides running a 100-acre farm; would have taken more than twice as much surplus, had I given my entire attention to the bees. I have seen a bee go from dandelion to ground-ivy flowers the same visit. My bees worked on the lilac this spring. What the species of lilac is, I do not know; it is our common kind, and the only kind I have ever seen.

North Robinson, O., Aug. 5, 1883. J. H. EBY.

I have shipped $770 worth of queens to date.

Mortonsville, Ky., July 30, 1883. J. T. WILSON.

Honey crop is most excellent here this year. Hives are full, inside and out, so to speak.

Cairo, Ill., Aug. 3, 1883. M. R. KUEHNE.

We are about the middle of basswood, and are having the heaviest yield from it that we ever had here. E. LOOMIS.

Algona, Ia., July 28, 1883.

The past year has been a very good honey season. I extracted 9 barrels of honey, and got 670 lbs. of comb honey. I have now 41 stands, for which I owe many thanks to bee papers.

HENRY W. SCHMADAKER.

We are having a good yield of honey, the first for 4 or 5 years; but I have had my dish right side up all this time. Clover, clover, clover; I never saw it more plentiful. JOS. M. BROOKS.

Columbus, Ind., June 19, 1883.

I have just extracted all my honey, and the "big 6-story hives" didn't do quite as well as I hoped. The *average* from the large hives was 16 gallons. The honey, though not sealed, was very thick.

R. C. TAYLOR.

Wilmington, N. C., Aug. 3, 1883.

IMPORTANCE OF FEEDING WHEN THE HONEY STOPS.

I started in the bee-keeping business last spring with 2 colonies; now have 4, and have extracted 140 lbs. of first-class honey (*no* box); I am in love with the subject, and like to be among the bees. For a short time past the queens have not been laying much. I commenced feeding a little sugar syrup, and to-day find *every* cell filled with eggs. I find that feeding them a little is a first-rate thing to do, and pays *well* for the trouble. A. N. CLARK.

Flatbush, L. I., Aug. 7, 1883.

I have got one patent hive, and I want to know where it was made. It is a sash hive. The sash are tipped with tin at the corners; and where they rest on the hive they have tin horns, so that the bees never fasten them, and they can be lifted out without the least trouble. Please inform me who makes them, and the price. JNO. BOYD.

Hobbs, Ind., July 24, 1883.

Now, I really do not know whether this belongs in "Reports Encouraging," or not; but I guess it does. Your humble servant is the man who invented the frames with "tin horns" on them, friend Boyd.

TOO MANY SWARMS TO HIVE.

Such a honey crop as this year I never had before, and I never was out of bees since 1860; but I came near getting sick from overwork, extracting, hiving and returning swarms, and cutting queen-cells. I increased to only 37 from 27, and sold and gave away only six. Swarms were no sale this year; farmers found and hived runaways from fences and bushes as they came to them, and they have been so numerous that a good many let them go again for want of time and a hive. GEO. L. HOLLENBACH.

Noblesville, Ind., July 24, 1883.

12,000 LBS.

We are having a little too much rain, but it keeps the white clover still blooming finely; and with the bush, swamp woodbine, Indian corn, and sorghum, the bees are bringing in the nectar with a rush. I have taken off to date, 12,000 lbs., and extracting at the rate of 500 lbs. per day. This is the greatest country for honey anywhere to be found; but the fear of malaria will keep away many Northern bee-keepers. None but the Southern salamander will try it, although I must say, on an average we have as healthful a country as anywhere. We shall soon be cut up with railroads, and then Northern men will come and prospect around. O. M. BLANTON.

Greenville, Miss., July 9, 1883.

I like GLEANINGS well. I know the instruction I got from it was worth several times the price. I will recommend it to my neighbors. I expect to take it as long as I have a stand of bees. I started with three stands last year. I got 200 lbs. of honey, and part of it in 1-lb sections. I sold for 23 cts. per lb., and the rest we used. My bees cost me $30.00, and I have 7 good stands at work now. I shall try to double this number by natural swarming this season. I like to watch and handle bees, even if they do sting me once in a while. I started my bees on maple sap as soon as it would run, and it did them good. They are now at work on clover, sumac, and buckwheat. W. J. PHILOW.

Paola, Kan., June 23, 1883.

A CROSS BETWEEN ITALIANS AND HOLY-LANDS; 382 LBS. FROM THE OLD STOCK, AND 241 LBS. FROM ITS SWARM.

I think I have the "boss" bees at last, which are a cross between the Italian and the Holy-Lands. After getting Italian queens from a dozen or more breeders, I at last got what I thought was a good strain of Italians, then I sent to Henry Alley for a select tested Holy-Land, and let them cross with my best Italians. Well, the result was I got one swarm from them last year the 11th of May, which made me 394½ lbs. of comb honey, after filling the hive, so I thought I would run them this year for extracted honey, but they would swarm, on the 21st of May; but from the old swarm I have extracted 382 lbs., and from the new swarm 241 lbs. comb honey up to July 12. How is that? O. E. COON.

Le Moore, Cal., June 15, 1883.

BEES IN MANITOBA.

The hive of bees you expressed to me July 6th came through in eight days. They flew very lively for a few minutes, and settled down all right. They carried in pollen in two hours after they were let loose. Some of my black bees went into their hive. They were soon driven out.

Whitewood is 250 miles west of Winnipeg, and 40 miles north of the line of Dakota. Didn't the little fellows get a long ride? I don't think there are any other bees in this Territory. I put an upper story on the one you sent me; they started to build comb this morning. The Italians are larger than common blacks, and I think will work better on the prairie flowers. **JOHN HEMSWORTH.**

Whitewood, Manitoba.

1000 COLONIES OF BEES, AND 50,000 LBS. OF HONEY.

As I am interested in bee culture, I thought I would let you know how they are doing in this State. Myself and brothers have 1000 stocks; think we shall get about 50,000 lbs. They are not doing well, as it has been so wet. Please write and let me know what the prospect is for a honey crop over the U. S. As I have never seen GLEANINGS, please send a copy; and if I like it I will subscribe. **F. S. COONS.**

Cold Spring, Wayne Co., Pa., July 28, 1883.

Why, friend C., it seems to me by the number of bees you mention you ought to have all the bee journals and bee books in the world; 50,000 lbs. of honey sounds pretty large, but I suppose this is not a very big yield for 1000 stocks, for almost any of us ought to be able to secure 50 lbs. of honey on an average. We shall certainly be very glad to send you a sample copy, and furnish you all the information in our power.

DECOY HIVES, AGAIN.

A few evenings ago, just about dark, we were surprised to discover a swarm of bees hanging on the limb of a golden willow, close to the house. We had no idea where they came from, or how long they had been there; but they evidently intended to remain over night, as it was then too dark for bees to see to fly. I had set a decoy hive, filled with fdn. a few days before, and had noticed bees going out and in every day, but more especially on the day on which the swarm was captured. None have been seen to enter the decoy hive since; perhaps it was that which brought the swarm. We hived them in the dark, and they are doing nicely. **LOUISA SIMPSON.**

Lidcote, Kent, Ont., Can.

And so, friend Louisa, they did not go into the hive, but they did come and hang on the willow-tree. Well, I do not know but that was just about as well. May be this does not exactly belong in Reports Encouraging; but I should consider it quite encouraging if I should find a nice swarm in a similar place.

CONVENTION NOTICES.

WESTERN BEE-KEEPER'S ASSOCIATION.

The annual meeting will be held at Independence, Mo., on the 20th and 21st days of Sept., 1883. Special invitation to all bee-keepers. **S. W. SALISBURY,**
Secretary.

The Kentucky Bee-Keepers' Society is called to meet at the Southern Exposition Building, Louisville, on Wednesday and Thursday, August 29 and 30. The premium exhibition of bees and honey will take place August 28 to September 1st. A full attendance is requested. **N. P. ALLEN**, Sec.
G. W. DEMAREE, Pres.

Our County Bee Association holds a bee fair at this place the first Saturday in Sept. The object is to exhibit and explain every thing connected with the apiary. We would like to have something from you. Every exhibit will be given due credit and prominence. **JOHN M. JONES**, Sec.

Greenfield, Hancock Co., Ind.

TO THE MEMBERS OF THE NEBRASKA STATE BEE-KEEPERS' ASSOCIATION.

I desire to call your attention to the liberal premiums offered by the Nebraska State Agricultural Society in Class Seven, entitled Bees, Honey, and Apiarian goods, and especially the premium of $25 offered for the best colony of bees. The test of colonies will be net gain, and will be weighed and sealed August 28, and weighed again September 11. Each colony must be the progeny of the queen and colony on trial. All shipments in this department can be made to the Hon. B. E. B. Kennedy, superintendent Class Seven, and bees should be on the ground on or before August 27. All other articles may be entered up to noon of September 10.

M. L. TRESTER,
Sec'y N. S. B. K. Association,
Greenwood, Neb.

OHIO STATE BEE-KEEPERS' CONVENTION.

The Ohio State Bee-Keepers' Association will hold a convention during State Fair week at the State Fair grounds, Columbus, O., commencing on Tuesday evening, Sept. 4. The following programme has been arranged:—

Tuesday evening, Sept. 4.—1. Greetings and organization; 2. Annual report of Secretary and Treasurer; 3. Election of officers; 4. Annual address of President; 5. General discussion of topics presented by members present.

Wednesday evening, Sept. 5.—1. Address by S. D. Riegel, on improvement in bee culture, as deducted from the season's operations, followed by discussion on same; 2. Question-drawer, and discussion on topics presented.

Thursday evening, Sept. 6.—1. Address, or general talk, by Vice-President Aaron Benedict, on the rearing and management of queens, followed by discussion on same; 2. Question-drawer, and discussion on topics presented.

Conference meetings of bee-keepers, and those interested, will also be held each afternoon at one o'clock, in Apiarian Hall on Fair Grounds.

The place of meeting of convention, to be decided at the time of the fair—probably in the upper room of Apiarian Hall.

Everybody who is at all interested in bees is invited to meet with the association; and all who can, bring articles for exhibition, as efforts are being made to render this department a grand success.

The State Board of Agriculture has furnished the bee-keepers a separate hall for their exhibits at the State Fair, with an upper room in which to hold meetings. Ample room will be furnished for all exhibits. **DR. H. BESSE**, *Pres.*
DANIEL SPEAR, *Sec.*
AARON BENEDICT, *Superintendent Apiarian Hall.*

Honey Column.

CITY MARKETS.

The following market reports were too late for our last issue.

BOSTON.—*Honey.*—We quote you our market as quiet. We had our first arrival of new comb honey last week, and offer at 23c. We made a large sale of Florida extracted at 9c. **CROCKER & BLAKE.**

Boston, Mass., July 30, 1883.

NEW YORK.—*Honey.*—We take pleasure in quoting honey the same as last issue. Prime yellow *beeswax* is more plentiful, with a limited demand. We quote 31@33. **H. K. & F. B. THURBER & CO.**

New York, July 31, 1883.

I have 4000 lbs. late extracted honey in 200-lb. barrels; will take 10c per lb. on board cars here. **F. MINNICH.**

North Freedom, Wis., July 26, 1883.

I have one alcohol barrel filled with (A No. 1) clover honey. Who will make me an offer for it on board of cars at Muscoda? **F. L. SNYDER.**

Orion, Richland Co., Wis., Aug. 11, 1883.

We have 40 barrels of clover honey, *first quality*, for sale, in quantities to suit, at reasonable prices. Barrels average 525 lbs. We can put it up in any shape to suit customers. **CHAS. DADANT & SON,**

Hamilton, Hancock Co., Ill., Aug. 8, 1883.

"Forgettery,"

Or Department for those who don't Sign Their Names, etc.

INCLOSED please find one dollar, for which please send me by return mail its worth in section-box foundation. If not on hand, any thing in the line will do, as I am in haste to prevent swarming.

Montville. July 24, 1883. L. A. ROBERTSON.

You see, our friend wanted his fdn. by return mail, and he was in such a hurry that almost any thing in that line would do. But for all that, all he said about where he lived was Montville. Our clerks found, on looking at our Postal Guide, that there are Montvilles in nearly all the States, and therefore there was nothing more to do but to wait until he got impatient enough to write again, which he did after watching and waiting for the mails every day, I presume, for just 14 days, and then he wrote us the card as below:

On July 24th I wrote you a letter, inclosing one dollar, for foundation. I have heard nothing from it yet. Please inform me whether you received it or not. L. A. ROBERTSON.

Montville, Aug. 7, 1883.

Well, now, the particular point of this letter comes in here: You will see that in his *card* he says simply "Montville," and not a word more; and had it not been for the fact that the office stamp on the back of the card was legible this time, we should still be as badly off as before. Had our friend even put on his county, which I have so often talked to you about, we should have been able to locate him. Once more, what are we going to do to make people tell who they are and where they live? The foundation was tied up, all properly stamped, and plainly directed, as far we could direct it, and there it was for two weeks, while he was waiting two weeks.

DECOY HIVES AND OTHER MATTERS.

THE honey-flow has been heavy and continuous thus far this year, and prospects still good. People are getting very enthusiastic about bees in this section. Bees prospect for their new home before swarming.

DECOY HIVES.

Almost every one in this section of country puts hives up in trees to catch runaway swarms. As many as 50 have been reported as caught. I knew of six swarms to go into the hive, and in every case the bees were working in the hive from one day to a week before, as strongly as if a swarm were already in the hive.

After carrying a hive to the bee-house, in which a swarm had been caught, I took some sections, fastened a queen-cell and some old combs into them, and placed them so that the workers that were left out might go in. They hatched her, and she is now laying nicely.

I have been putting old combs into the new swarms; and in every case, eggs are laid in the new comb before any are to be seen in the old; however, in a few days the old combs commence filling with eggs, and all goes well. Can you give any reason for the queen not laying immediately in the old comb?

I send, for a name, a specimen of a mint. It blooms earlier than catnip, and lasts a long time; is a very good honey-plant; bee-men ought to encourage the growth of mints, etc., along hedges and fences. C. STIMSON.

Tiskilwa, Bureau Co., Ill., July 24, 1883.

Friend S., we are very much obliged indeed for the facts you give us in regard to decoy hives. I have many times thought there was a field for invention here, and that the time would soon come when the apiarist would have the hives so prepared that the swarms that come out would be almost sure to go into them.— In regard to the queen not laying in old combs, it has been several times reported that she would lay quicker in a frame of fdn. than she would in old natural combs. I can not tell just why this is, but it seems to speak a little in favor of new combs occasionally.— The plant you inclose is the well-known motherwort, so frequently spoken of in A B C, and often mentioned in our journals.

A BEGINNER'S TROUBLES.

THE BEES THAT WOULDN'T BUILD COMBS WHERE COMBS WERE WANTED.

I PURCHASED some bees of you about the middle of July, a half-pound, frame of brood, and queen. I think it wonderful how well they are doing raising brood and making comb, just as white as paper—the whitest I ever saw.

But, I am taking up your valuable time. There is one thing I do not understand. I put on the enameled cloth, as directed, and they would persist in starting to build comb on the cloth. They built a piece as large as my hand, in two days. I took it off and fastened it to a frame, and took the cloth away. They accepted it, and went to work and filled the frame, and now they build the combs up above the frame, and have commenced on the lid to meet it. I have put the cloth on again. I have found nothing in the A B C that gave me the desired information. If you will kindly tell me why they built up, and how to prevent, I would be much obliged. There were sheets of fdn. in the hive all the time, and they preferred to stick the comb to the cloth.

Groveland, Iowa. MRS. E. E. COLL.

Why, my good friend, you must surely have spaced the combs badly. The enamel sheet should always be over the frames for the express purpose of keeping the bees from getting up against the cover. Surely I told you that, did I not, in the A B C book? Now, if a sheet of fdn. had been at the exact point where the bees started their new white comb, they surely would have used it. The sheets of fdn. should be spaced about as far apart as bees ordinarily build their combs, say 1½ inches from center to center, or a little less than that. All comb-building on the inside of the frames is wax and time wasted.—I am very glad indeed to hear that you are prospering so well with your bees. When bees are building nice white combs, such as you describe, you can always be sure they are all right. Building up colonies in that way is to me the most enjoyable part of bee culture; and when I see them eager to build combs, I always catch their enthusiasm, and feel happy accordingly.

JUVENILE DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

> "A chiel's amang ye, takin' notes;
> An' faith, he'll prent it."

WELL, little friends, you see JUVENILE has doubled its size this month, do you not? Well, there are several reasons why we decided to make JUVENILE as large as its "mother." The letters in regard to the National Convention could not well wait until the regular issue; besides, as many of the little folks read Our Homes, we thought it might be just as well to have that in your part of the journal; and thus, you know, we can have old GLEANINGS all bees, or pretty much all. You see, if I throw in the JUVENILE, and do not make any additional charge for it, nobody will feel like disputing my privilege of making it just as I have a mind to—partly old and partly young folks, and partly of something that will interest all classes alike. I presume it will settle down where it should be eventually, for I am a great believer in the doctrine of the "survival of the fittest," or the survival of the best, if you choose to put it so. That is why I have such firm faith that we shall soon do away entirely with saloon-keeping. The best people are all in favor of temperance. Now, if there were no God above, wicked men might prevail; but as there is a kind Father who watches over all, I am sure he will never let them prevail. Therefore right and truth must triumph finally.

Do you want to hear about Peter? Well, in the first place the friends and relatives all scold so much about his name, that I do not know but that we shall have to have a different one, and so I told them we would call him Peter until some one else gives him a better name. Do you know any nice little name for a little rosy-posy, chubby, dimpled boy-baby? If so, you can just mention it when you write. He is just now delighting himself in the knowledge of the fact that he has a pair of hands. He doesn't know very much about them yet, but he has progressed far enough to discover that his little pink thumbs are his property, and under his control; and I am sure you would just "giggle" if you could see him look a while cross-eyed at his thumb, preparatory to fetching it, by several awkward movements, around until he can get it into his rosy, juicy mouth. If you want to please him, just call him "dood boy." He seems to take this as the tallest kind of a compliment; and sometimes he just crows when you tell him so. And I am glad to say that he is getting every day to deserve the name more and more. There, shall I let you talk now?

My papa has twenty stands of bees. He has taken 103 lbs. of honey in section-boxes from 3 swarms. He had one swarm that went away; it swarmed 5 times. He hived them three different times.

Sunny Side, N. J. **LILLIE SHEETS.**

I thought I would write and tell you how our bees are getting along. We have had 15 new swarms; one swarm came out, and we hived them, and in about two hours we went out there and found a queen dead. I help my ma milk the cows.

Rock Spring, Mo. **KATIE GOUGH.**

My brother and I have each a hive of bees. There was a man who lives about eight miles from our house who died from the effects of bee-stings. There are a good many bee-trees in this neighborhood. **JOHN E. ALVIS.**

Montrose, Ia., July 16, 1883.

CAUTION ABOUT SAWING LIMBS OFF WITH SWARMS ON THEM.

My uncle has eight hives of bees, and a smoker. He takes GLEANINGS, and I like to read it. The Italian honey-bee is different from our native, or black bee, in color and size. One time my cousin was sawing off a limb of a tree that some bees had swarmed on, and the bees all came at him and stung him badly. **CHARLEY BEARDSLEY, age 13.**

Titusville, Pa., June 25, 1883.

My pa has 24 stands of bees; my ma has 2, and I have one. I must tell you how I got them. The bees came over, and ma and I fought them with water, and that is the way we stopped them; they alighted in a little peach-tree, and ma and I hived them. Pa has one swarm that came out and swarmed 4 times — July 25, 26, 28, 29. Pa killed six young queens. I have a little pet lamb. I go to Sunday-school when it doesn't rain.

Elyria, O. **CHARLEY DRUSENDAHL, age 10.**

THE BOY WHO CAN FIND QUEENS BEFORE HE IS THREE YEARS OLD.

Reading over No. 10 of the JUVENILE for Jan., 1883, I notice a piece over the signature of L. G. Hallup; this signature should be S. G. Holley, my mistake, no doubt, in not signing plainly. I read this piece to my little boy (his name is Cleland, but we call him Clelie), and asked him what he had to say in reply to your note at the bottom, and he says, "Tell Mr. Root I will show him a queen bee at the convention next fall." So I hope, if all goes well till then, to help him keep his promise. He is not yet 3 years old. He claims the JUVENILE as his bee-paper, and is very proud of it, and asks me to read it to him, and we have great chats about our interesting little pets. **S. G. HOLLEY.**

New Hamburg, Ont., Canada.

Many thanks, friend H. I should be very glad indeed to see our little friend, and to have him hunt out the queens. So there will be another attraction to be considered at the convention, won't there, Clelie?

Pa has 30 stands of bees; he has the Italian bees, of which he thinks a great deal. All of his bees don't make 700 lbs. of honey. He has a smoker, but no extractor. We live in the South, where we have no use for chaff hives. I have a dog and pet sheep which I raised, and am very fond of. I love to read in the JUVENILE the letters of my Northern friends.

Alatoona, Ga. EMMA NICHOLS, age 9.

I live in the country, and go to school, and have good times. My school will soon be out, and then I shall have to go to work. My pa farms 200 acres of land. He has 18 hives of bees; he is making hives now for next summer. WILLIE FETROW, age 12.

Yocumtown, Pa.

That is considerable land, Willie, and I hope you will do your farm work as well as you write. Do you like farming better than school?

I am just a little over 8 years old, but I go to school. I have not got anybody to go with me now, for little brother Emory died two months ago to-day, and that left me alone. He was 6 years old. He could read in the First Reader. I don't know much about bees, but I like to see them work. I think they are smart little things.

L. MAY HOUSE.

Dodd's City, Tex., June 3, 1883.

I think bees are *smart* little fellows, friend May, judging from the way people rub when the bee puts in his bill for damages.

My pa had one swarm of bees last summer, and they died last winter. He took from it 85 lbs. Pa is superintendent of the Sunday-school. I go to it. In the year 1881 I watched the bees for Uncle Augustus, and got $2.10. Last fall he lost $5000 worth of honey and machinery. His canning house was burned down, and every thing that was in it. The fire started from a saloon. ANNE BULLIS, age 9.

Smithland, Ia., July 29, 1883.

Worse troubles than fires come from saloons at times, do they not, Anne? A brain on fire is far worse.

We have 9 swarms of Italian bees. The bees belong to ma, but pa tends them. They were my brother's, but he was afraid of them, and he sold them to ma. I go to Sunday-school. I have gone to school in a dug-out, and have seen lots of Indians; but we have got a good schoolhouse now, and the Indians have all gone away. The flowers are for Peter. SADIE H. BOGGS, age 10.

Edincott, Jeff. Co., Neb.

So your brother sold his bees to your ma, did he, Sadie? I wonder who among our juvenile friends can tell us what a "dug-out" is, and how it is made; that is, the kind of dug-out they have in Nebraska and other Western States.

God bless you, Sadie, for remembering little Peter. He is getting now so he can laugh and crow, in a manner that would make anybody feel happy and look good-natured. It is the first bouquet of flowers that he ever received, and we all appreciate your kind remembrance.

I saw the other little girls writing, and I thought I would write too. My father has no bees; he is a farmer. We bought a good deal of honey last year, but I do not know whether he is going to buy any this year or not. We have plenty of bee pasture nearly all the year around. My uncle, Rufus Robinson, has 126 colonies. He has had 8 swarms. All the honey they are making now is from jack-oak trees. I do not like it myself.

La Clede, Ill. MAMIE KEEN, age 11.

It seems to me, Mamie, your pa is just the man who ought to keep bees.— The "jack-oak" you speak of is probably what we call "black oak." I fear few would like honey from such a source.

EMMA'S STORY ABOUT THE BEES.

I have but little to tell you. We have only one hive of bees. Ma followed them and threw water among them, and they stopped on a high limb. Pa sawed them off three times. He says he will not rob them this year. EMMA HATCHER, age 11.

Dodd City, Fannin Co., Tex., July 17, 1883.

Why, Emma, did the hive really start to run off, or was it only the bees? And did your pa saw the same limb of three different times, or did the bees go on three different times? I think we must take you as you mean, and not as you say, shall we not?

FROM 2 TO 16 IN TWO YEARS.

As I am a beginner at bee-keeping, I would report how I succeeded. My grandpa started me with two swarms of bees last lear, and they swarmed twice apiece that year, which made me six swarms to go into the winter with. They came through the winter in very good condition; they had plenty to eat, and more bees than they went into the winter with. I did not lose one swarm, and now have 16, and are all full of honey. My bees all swarmed twice apiece before the 11th of July, and still act like swarming.

D. M. SAULSGIVER, age 13.

South Frankfort, Mich., July 15, 1883.

Well done, my little friend. I know of a good many folks who are twice as old as you are, who do not do half as well as that. Now you are all ready for a honey crop. Do not let the bees get ahead of you.

TOBACCO AMONG THE JUVENILES.

Please send ma a smoker. I hired her to quit using tobacco, for 15 cents. We have three hives of bees; two are ma's, one is mine. We have to borrow a smoker when we use one.

JOHNNY CROSIER, age 8.

El Dorado, Butler Co., Kan.

Why, bless your heart, Johnny, when I started the Tobacco Column it never occurred to me that I should be so fortunate as to get the little ones to help me in the work. I am sure that it is God that is putting it in their hearts; and may he help your mother in all her efforts to give up tobacco. Tell her when she is tempted, to ask the Lord to help her; and may he be praised for the influences that seem tending toward the general overturning of this old habit of tobacco-using.

ABOUT THE HENS THAT ABSCONDED, ETC.

I have just been away in the country, helping my uncle to make telegraph poles. While out there I helped him to transfer three colonies of bees from old box hives to good frame ones. A great lot of his bees died since he took them out of the cellar in the spring.

My mother is a widow woman. I had four hens and a rooster; but about 10 days ago two of my hens were like uncle's bees — they absconded. I am pretty rich, though, for all, as my ma sold my hog while I was away, for six dollars, and uncle paid me for helping him to plant potatoes, by giving me a small patch for myself, and he promises me one dollar for helping him at telegraph poles.

Shelburne, Ont., Can. W. J. MILLER, age 11.

A NEW HONEY-BEARING MAPLE.

Pa bought 2 swarms last winter; we transferred them out of their old box hives into Simplicity hives. They are doing well. Our bees work on vine maple when it is in bloom. The honey is as clear as can be, and I like the flavor of it first rate. The flowers are red, and very pretty when they are in bloom. We got about 50 lbs. of honey this spring. Give my love to Blue Eyes.

CLARA M. WILCOX, age 13.

Silver Creek, Lewis Co., Wash. T., July 6, 1883.

Thank you, friend Clara. When I first read your letter I could not think what you meant by *vine* maple; but our proof-reader looked in the botany, and he found there a vine maple, sure enough. Now, if it bears honey that tastes any thing like maple molasses, I should think it would be very fine indeed. Do you mean to say that you got 50 lbs. of maple honey? If so, I should dearly love to have a tin can full of it sent to us.

LIZZIE AND THE BEES.

Hello, Uncle Amos! Here we are again, just the same as ever. The bees are all right. We got three swarms. We have now one swarm that has no queen. Pa took a frame of bees out of another hive, and gave it to them. They made a queen-cell, and pa opened it, and there was a young bee in it, and it was dead. Pa gave them another frame of young and old bees, and they never fought a bit. I put the fdn. in frames for pa, and put starters in the sections. We had snow here May 21.

For the day of the Lord is near upon all the heathen; as thou hast done, it shall be done unto thee: thy reward shall return upon thine own head.—OBADIAH 15.

Where is the shortest verse in the Bible?

LIZZIE JOHNSTON, age 13.

Danforth, Ill., July 20, 1883.

Hello, Lizzie! I suppose that you and your pa have real good times with your bees. I am glad to hear they are all right. But is not that a pretty hard text for a little girl only 13 years old?

100 CHICKENS, AND OTHER THINGS.

I see you are such a friend to children, I would like to be among them. I read the letters in JUVENILE, and mamma said I could try to write one too. I can't tell much about bees, as these are the first we ever had. Papa bought one colony this spring, and now we have three. Please tell me if you know what this is. It was running out and in the hive with the bees, and no one seems to know what it is. I went to school this summer, and didn't miss any. I go to Sunday-school too. We have 100 chickens.

MINNIE CHESTER, age 7.

Carthage, Mo., July 8, 1883.

The bug you sent, or whatever it was, Minnie, was all broken to pieces, so that I could not tell what it was, even if I had been an entomologist, like Prof. Cook. It looks a little like a big hornet, or, at least, the pieces do. Was not that what it was? I am glad you go to school, and do not "miss any."

A BANTY HEN THAT SAT ON PARTRIDGE EGGS, ETC.

I am glad there is a man in the world to send little girls and boys books to read. Ma set the little banty hen, and I put 3 partridge eggs under her; and the ducks — I reckon they thought they were June-bugs, and swallowed them. Papa had a swarm of bees yesterday, and he got a glass and caught the queen, and put her in a cage, and tied the cage on a frame, and they settled on it. He has 38 hives.

Now, Mr. Root, as you are a Sunday-school man, I will give you a riddle. Out of the eater came forth meat, and out of the strong came forth sweetness.

JOSIE DAVIDSON.

Pisgah, Jackson Co., Ala., July 14, 1883.

Why, Josie, you do not really mean to say that you have ducks so large that they gobbled up the young partridges, do you? It seems to me that is almost a "yarn," is it not? That is a tiptop riddle. I wonder where you found it. Is it any thing about bees or honey?

JUVENILE SHORTHAND.

My father had three swarms of bees in the spring; and as he has a share in a store, he can not spend much time with the bees. He said he would rather the bees would swarm themselves; but as it is, he divided them, and now he has 6. We live about ¼ of a mile from Iowa City. There is a man about a mile west of us who has all the bees he wants, and so is selling them. My father has just started with some hives to take out there to wait until his bees swarm. He pays $2.00 for the bare swarm. I have read about the shorthand writer in your office, and about your type-writer. I have learned the wonderful art of writing shorthand. I can not write very fast, as I have not practiced long enough. I have been learning on the type-writer. Mr. Moran is my instructor in the art. LA FOREST L. PRATT.

Iowa City, Ia., June 30, 1883.

My little friend, our shorthand writer says you are trying to write ahead of your lessons, and are writing words in a manner you will have to unlearn. Your letters are too large, and out of place. Don't write one solitary word unless you find it in your book, or a good teacher shows you how.

Let me tell you something about the bees. They are working very well now. We have taken about 450 lbs. of honey this year. Those plants we send you yield a great deal of honey. I should like to have you tell me the common name, and also the botanic one. We had a swarm of bees some time ago, and they settled on a stump. We took the milk-bucket and brushed them off, and then poured them into a hive.

Pa caught a large turtle some time ago, that weighed 19 lbs.; he says he is going to take the shell to make a wax-basket.

Let me tell you a good way to break dogs from sucking eggs. Get a box of concentrated lye, and rub the egg in it, and lay it somewhere so the dog can get it.

I have had one sting this year. That one crawled up my arm, and I mashed it. Pa told me to ask you if the honey-pear is good to eat. Our chickens were dying with the cholera, and we gave them Sheridan's Cavalry Condition powders. They are for cattle, but are good for chickens. All of ours are well now. EVIE L. STEGER.

Payne's Station, Va., July 2, 1883.

A LETTER FROM A FIVE-YEAR-OLD.

My pa has a lot of bees, some Italians. I go to Sunday-school, get a paper, and a card with "Golden Text." This is not much of a letter. May be I will do better next time. I read and spell in five letters. I have a sister three years old next August. I can't write alone, so pa holds my hand.

Albion, N. Y. Elvira L. Burke, age 5.

HEMP AS A BEE-PLANT.

My pa has 65 swarms of bees. He plants hemp in his bee-yard; they make a shade-tree, and the bees work on the ones that flower; and the kind that don't flower, bears seed. We keep birds too, and I attend to them. Sarah A. Christian, age 11.

Lorraine, Ont., Canada.

Thank you, Sarah. I knew that hemp at times bore large quantities of pollen, but I did not know that it bore honey. So there are two kinds of plants, are there — one that bears blossoms, and one that does not? You see, you knew something that I did not. I expect to learn a great many things from these little friends of mine, if God spares me many years to read over their little letters as they come in day by day.

TEN NIGHTS IN A BAR-ROOM, AND THE FRUIT IT IS BEARING.

I received Ten Nights in a Bar-Room, and certainly owe you a debt of thanks for it. Papa has 53 hives; one died of suffocation. We have one licensed hotel in Dry Run, and a man is trying to get another. The temperance people are trying to stop both, and it makes a great deal of excitement. I think if everybody would read the book you sent me they would want to shut all bar-rooms.

Dry Run, Pa. Clara B. Alexander.

I am very glad to know, Clara, that there is excitement in your town on this matter of saloons or no saloons. There is a great deal of excitement just now in our town, and, I am inclined to think, most of the towns in our country. Excitement is a good thing when a great evil is to be put down. And may God grant that peace may never come till this matter is settled "on the Lord's side."

THE SUN-GLASS TROUBLE.

My brother, J. Harry Willson, received his sunglasses all right, and I am ashamed to tell you that he *will* light his pipe with them.

Mrs. St. Julian T. Moore.

Monroe, La., July 30, 1883.

My good friend, I am sorry to know that your brother is a tobacco-user; and I hope that, when he sees his name here in print, right before all these children, he will decide to use his sun-glass for some better purpose. By the way, a bright thought strikes me. If he should give up tobacco, and we should give him a smoker, he might use the glass to light his smoker with. Just open the door a little, and let the focus strike on the wood for an instant, working the bellows at the same time, and I am inclined to think the smoker would light quicker than it could be lighted with a match. Now you see the next thing to do will be to have a sun-glass attached to every smoker, so bee-keepers can light up quickly during windy days, and without any necessity for having any matches around, either.

THE TROUBLE THEY HAD AT SALLIE'S HOUSE IN MAKING THE SWARM CLUSTER.

My brother bought a stand of bees in the winter of 1880. The next spring they swarmed twice. The first time they swarmed my mother went out and beat on a pan. All the bees stung her on the head, and she had the headache all the afternoon. The next time they swarmed, my aunt went out. The bees stung her, and she threw the pan away, and we could not find it for several days. I go to school, and study four branches. I got a prize for not whispering for a month.

Pin Oak, Ill. Sallie Nichols, age 13.

I am real glad to hear, Sallie, that you got along a whole month without whispering at school. I am aware that it is a pretty hard matter for a girl 13 years old to do; but any girl or boy can do it if he sets down resolutely that he will do it. Our tongues are to be ruled by us, and woe betide the girl or boy who lets the tongue get unruly.

ALL ABOUT HUMMING-BIRDS AND THEIR NESTS.

Will the Juvenile let a little Texas girl 9 years old speak her piece? My pa keeps bees; he got lots of honey last year, but little this year. His bees are nearly all Cyprians. Ma says she would rather work with the Cyprians than Italians, for she gets but few stings from the Cyps; but the Italians by some means get mad, and go to fighting.

We were playing in the orchard the other day, and brother found a little humming-bird's nest. It was about as big as a hen's egg cut in two. It had two little birds in it. The old bird sucks the honey from the flowers like a bee, and she puts her bill in the little birds' mouth and throws up the honey into it like a pigeon. Do you not think they ought to be called honey-birds? The little birds have flown off, and we have the nest in the house for a show. It is made of cotton from the cottonwood, glued together, and nice little bits of bark glued on the outside, so it looks like a mossy knot on a limb.

It has not rained here since June 12th.

Dresden, Tex., Aug. 6, 1883. May Carroll.

CLINT CAPEN AND HIS FATHER.

My pa has 21 swarms of bees. Some are in nail-kegs, some in soap-boxes, and some in salt-barrels. When a swarm comes off, pa grabs the first thing he gets hold of, and hives them; but he thinks of sending for some of your hives next winter. John Stillwell puts up bee-boxes in the woods, and almost always gets bees into them. But the bees don't go in my pa's boxes; so he took a ladder and climbed up to Mr. Stillwell's, and smelled of them to find out what he put on them. Pa came home walking kind o' one-sided; and when ma asked him what he found out, he said he "found out" better than to climb forty feet on a rotten ladder.

Farm Ridge, Ill. Clint Capen, age 10.

Well, now, Clint, aren't you a little rough on your paternal relative? Perhaps your father has a great deal to do, and does not pay much attention to bee-keeping, even if he has got 21 swarms. Can't you get your friend John Stillwell to write us a letter and tell us about his success with decoy hives? Your pa thought he would get at the secret by smelling of the hives, did he? Well, I am sorry he did not tell us whether he smelled any thing, as well as what he "found out" in regard to the matter. I trust he was not hurt much in his fall, was he, Clint?

SEVEN-YEAR-OLD MARY, AND HER OBSERVATIONS.

Uncle Fred and aunt Emily keep bees, and I watch them put section boxes on. A little boy who lives with Uncle Fred threw dirt at some bees that were going after honey. He thought they were a swarm of bees. I shall be seven years old in a month. Will you please send me a little book? This is the first letter I ever wrote. MARY FREEMAN.

Milan, Ill., July, 1883.

So I suppose, Mary, your bees went out to work with such a rush that your little friend thought they must be swarming. Now, you can tell him that he is not the first person who has been fooled in just that way. When our bees go off for basswood or buckwheat, people passing by often come and tell us that our bees are swarming.

HOLY-LAND BEES AND MAMMOTH RUSSIAN SUNFLOWER.

Our Holy-Land bees are determined to swarm, no matter how much pa divides them. Last Saturday three swarms came out, one after another. Two of them alighted on our Russian sunflowers, and my oldest brother, Eli, held the stalks for fear they would break; and the day before, while pa was away from home, Eli and Mary hived a swarm alone, and Mary held the stalk, and bees ran up her sleeve, but did not sting her, which shows they are not very cross. MAGGIE MICHENER, age 9.

Low Banks, Ont., Can., July 16, 1883.

You have given us some very good facts, Maggie. I do not quite believe that I would like to have Holy-Land bees run up my sleeve. But then, may be they would not sting if they were used right. Do your bees get any honey from your mammoth Russian sunflower?

BRICK BEE-HIVES, ETC.

My pa extracted about 74 lbs. of honey this week. Have you got a brick bee-hive? My pa has 4, and thinks they are nice. Will you please give a honey-cake recipe in the next JUVENILE, if there is room, as I want to bake one? If I bake one I will write and tell our friends what kind of luck I have. Answer to Howard Fisher's question: What two chapters in the Bible are alike? The 19th chapter of II. Kings and chapter 37 of Isaiah are alike. Where is the least verse in the New Testament, and how many words does it contain? JESSIE GULLEY.

North Salem, Ind., June 20, 1883.

Well, Jessie, I do not know any recipes to make any honey-cake, but I dare say some of our readers do. Who will give us some recipes for our JUVENILE? I am glad you knew there are two chapters in the Bible just alike. To tell the truth, I did not until I saw it in your letter.

SAYING GOODS ARE NOT THERE; A COMMENT BY ONE OF THE JUVENILES.

Papa found the goods at the north depot yesterday. He had been there and at the other offices (there are four freight depots in the city) several times; and when he called yesterday they said there was nothing for him; but he told them that a tracer reported the goods as then uncalled for, and they hunted them up. They had lain there since the 2d of June.

The bees are doing well. We have taken 24 lbs. of white-clover honey off from one hive. We had but one hive here in the spring, but they have increased to five. We have more in the country.

Fort Wayne, Ind. BRET HOPKINS.

Thank you, Bret. If we can not do any thing else to stop this work, we will set the children to writing up such men in the papers. Over and over again we have had, this year, reports from bee-men who wanted their goods; and after the goods were traced up, it transpired they were all the while standing in the depot. What shall we do with such agents? Were their depots too small or crowded? or are the men too small who have them in charge?

THE GUILER CHILDREN.

My papa has 22 stands of bees. Last spring one was robbed by the rest until it swarmed three times, and went to a neighbor's house, and he caught it in a box. Pa brought it home, and it is getting along all right now. He was working with the bees yesterday, and got stung just below the eye, and it is nearly swelled shut to-day. Pa's mentor set of glassware that you sent him was all broken except the butter-dish, and he forgot to tell you when he sent for the extractor. He had 18 stands of bees last fall, and wintered them all. Can you beat that? VIOLET E. GUILER, age 10.

Friend Violet, I am sorry about that glassware. Tell your pa to mention it when he sends again, and we will send him another, free of charge; and I will give our packers a good big talking-to, if they don't put more straw around the dishes.

MARY'S FIRST LETTER.

The baby's name is Herbert Amos. Pa wanted him called for you. I like honey; pa has taken about 20 lbs. of it. He says he wants to get lots of it when he gets the extractor.

MARY A. GUILER, age 8.

McCleary, Noble Co., O., June 25, 1883.

And so you have got my namesake at your house, have you, Mary? Please give him a kiss for me.

HONEY FROM THE WATER-LILY.

My pa has 27 hives of bees. They are working on white clover, and a kind of plant that we call water-lily. Pa lost two swarms of bees this year. I have had but one sting this year. They sting my little brothers quite often. The bees are working prettily now. I will send you a flower, and I should like to have you tell me the name of it. I will send you a bloom of the water-lily. If there is any other name for it, let me know. They are great bee-plants. The water-lily grows on the edges of the islands and in the land. I run to help pa to put rocks on the hives, to keep the wind from blowing them over. Pa is working grandpa's islands for him. Grandpa is paralyzed. Mother named the baby Ives. My sister and brother stay with grandmother. Pa has a soap-stone-quarry, and he wants to sell it.

Payne's Sta., Va. CORA F. STEGER.

Well, Cora, I am real glad to hear that water-lilies furnish honey. It seems to me it must be nice among the islands you speak of. I should be glad to see the water-lily. Since you tell of it, one of our boys who sets type says he has a water-lily, and that there are bees on it almost all the time. Wouldn't it be funny to have a water-lily patch on the honey-farm?

HOW TO GET GOOD SMOKER FUEL, AND HOW TO PREVENT THE GAPES IN CHICKENS.

My pa and my brother have 8 swarms now; some of them are large ones too. He cuts up corn-cobs fine, and uses them in his smoker. Last fall I gathered leaves for him to pack the bees in for winter. They all wintered well; but this spring some of them died. I have a black cat 12 years old, and I have a little black chicken that was hatched in an incubator, and chicky sometimes will follow the cat. We salt our chickens' food just as we do ours, and they never have the gapes.

HARLIE B. MORSE, age 8.

New Woodstock, N. Y., June 21, 1883.

I presume, friend Harlie, why the chicken followed the cat around was because, being hatched in an incubator, it never had any mother, and so chased after the first object it saw that looked as if it might possibly be its mother. Were you not sorry for the poor lone chicken? I am not quite sure about your gape remedy. The used to tell me, when I was a poultry-boy, that salt would kill chickens.

MINERVA, UNCLE WILL, AND THE REST OF THEM.

I like to read baby GLEANINGS. I see in your last number you have had sickness too. My aunt Maggie has been sick for 8 months, and this summer mamma took down sick with the fever. We could not get any one to come to help do the work, so Uncle Will and I had to do it ourselves. One day, when mamma had got able to go around a little, Daisy and I were watching the bees, and we saw a swarm come off. Mamma went out to see what hive they were coming out of, and we went for Uncle Will. Mamma got stung in the forehead, and it swelled both her eyes shut. A colored woman told her if she had had a mud ball, and had rubbed the place when she was stung, it would not have swollen.

I hunt the eggs and feed the chickens. I have 60 young chickens. If you will come to see us this fall, you can have fried chicken to eat. Is the wheelbarrow still full of books? Three swarms today, and not a very good day for swarms either.

MINERVA DUNCAN.

Black Lick, Ind. Co., Pa., July 3, 1883.

Well, Minerva, there is one part of your letter that is very interesting to me; I mean that part about the fried chicken. It is now just about my supper time, and may be that has something to do with it. I should very much like to go and see you, but I am so busy that I fear I can not.

A PLACE TO KEEP HONEY OVER WINTER.

My pa has 17 stands of bees; when they swarm he sprinkles them with a watering-pot just before he puts them into the hive, so that they will not rise up and fly away. Pa says in the attic over the kitchen stove is the place to winter honey. My grandma sent me a book last Christmas — the Roby Family. I think the bees ought to do pretty well by you, as you have been such a great friend to them.

GENEVIEVE HILL, age 8.

Randolph, N. Y., July 22, 1883.

My little friend, your pa is perhaps right about the best place to keep honey over winter; but we are beginning to think, a great many of us, that it is a pretty hard matter to keep honey just as it is when recently taken from the hives. I believe that, in many of our honey markets, the honey of last year's crop has been sold at a lower price than the new honey. It candies and sometimes sweats, and then it gets a slightly old flavor that some way seems to rob it of its delicious purity that we notice when it is first thoroughly ripened in the hives. I have been wondering if there was not some way to keep even extracted honey so the flavor would be just as clear and pure as when freshly gathered. If put in barrels, the barrels are pretty sure to give it some sort of a taint. I am not quite certain that the flavor will not change a little by being kept a year or more, even if put in glass and tin. Who can tell us more about this? If you can not answer, friend Genevieve, perhaps your father can.

A PEACH-BASKET HIVING-BOX, AND SOME OTHER MATTERS.

I live 20 rods from the mouth of Buffalo Creek, 40 rods from the mouth of the Elkhorn, and ten rods from the Spring Branch. My father is a bee-keeper; he thinks we have as nice a place for bees as any one around here. We moved here in 1879; in 1880 we commenced bee-keeping. We started with four swarms in the winter. They all died, so he was not a "Blasted Hoper" yet. Then he bought a swarm in 1881. In '82 we had 8 swarms, and one died in the spring. This spring we started with 7; now we have 20. They are all getting along nicely. Father gave me one swarm of bees. He says he calculates to keep 100 stands. He makes his own chaff hives. We use all chaff hives. We think they are the best. We put a newspaper in front of the hives when we hive them with a peach-basket. Father bent a hickory stick around it in the shape of a hoop, and left the handle from five to six feet long. We have had bees to go up into trees over 20 feet high, and father would climb up on a ladder and get them down with this hiving-basket. We think it is a very nice thing to hive bees with.

Our school is out. We have been having vacation. It let out the 12th of June, and it begins the last Monday in August. I have almost three miles to go to school; in the winter I get to ride part of the time. We have quite a large school. I like to go, and I like my teacher. Irene Wilson and I are near neighbors. I go over there to their Sunday-school, and I like to go. I think it is very kind of friend Wilson to have a Sunday-school, since we live so far from church. It is about four miles, I think.

My little sister Mattie is only six years old. She goes to Sunday-school too; she can not read, so she learns a verse for every Sunday. I had another sister who went too, and she liked to go so well she would not miss a Sunday, even if it was rainy. It was so rainy and nasty a couple of Sundays that mother would not let her go. She took sick on the 22d of June, and on the 10th of July she died. Her name was Bertheniah, and her age 11 years 10 months and 2 days. We all feel very lonesome without her.

I like to read the JUVENILE. My father, Sanford Deyo, takes GLEANINGS. **ROSELLA DEYO**, age 14.

Penrose, Ill., July 24, 1883.

Thank you, Rosella. Very likely your pa's hiving-basket is as good as any. No doubt you feel sad since your little sister is gone; but remember that she is with God, and you shall see her again if you live in obedience to his commands.

Our Homes.

> He trusted in the Lord, that he would deliver him. Let him deliver him, seeing he delighted in him.—PSALM 22: 8.

THE words of our little text to-day were first uttered to David, and afterward in nearly the same way to our Savior while on the cross. And throughout all ages ungodly men have had a way of laughing and jeering at those who put their trust in God, especially when the time of trial comes, and, so far as human sight can go, these trusting ones are left, as it were, alone to bear the trials and vicissitudes common to all humanity. David, it would seem, had his full share of severe trials to encounter; although he put his trust in God in a way that, perhaps, none other ever did, yet God saw fit to allow him to be persecuted and maligned and misrepresented and abused; an outcast and a wanderer, he fled from the bitter persecutions and hatred of one who should have been his best friend. Skeptics and infidels and idolaters laughed at his troubles, and jeered at what seemed to them his folly in still putting his trust in God. A few verses before the one where our text comes, it seems almost plaintive where he says,—

> But I am a worm, and no man; a reproach of men, and despised of the people. All they that see me laugh me to scorn: they shoot out the lip, they shake the head.

It would almost seem, friends, as if we could see them as they get around him in his trials and troubles. That expression, "They shoot out the lip"! poor David! Do you not long to be near him and to cheer him and to encourage him, and to repeat to him some of those beautiful texts, and to say to him, fear not? It seems to be God's purpose to let his children have sore troubles, yet it is said, "Whom he loveth he chasteneth." It would almost seem at times as though he purposely left us alone to try us. But all those who have trusted him know that when he has proved us, and when he sees that our faith is unflinching, then comes that wonderful sense of his presence and his love — the rewards that only he can give, and that amply compensates for all the troubles and trials we have passed through. Humanity seems so constituted that even the most trusting at times have temptations and doubts. God has delivered them and carried them safely through all troubles and trials heretofore; but a new and unexpected one comes up, and they fall to questioning. Can he, will he, take me safely through this trial? Alas for poor humanity! Knowing that we are weak and sinful, we begin to doubt God's love. We begin to doubt ourselves too. We begin to wonder, and it is well we do so, whether our hearts are really right before him. Are we honest with ourselves? Are we saying truthfully, by word and action, —

> Create in me a clean heart, O God; and renew a right spirit within me?

Such has been my experience, friends. I have told you year after year, ever since these Home Papers commenced, of my trials and my triumphs. A little over a year ago I was praying, and, I am sorry to say, worrying, about the issue of that trouble where I feared I should have a large amount of money to pay, up into the thousands, perhaps, for one who advertised in GLEANINGS. You know how deliverance came, and that the friends who had lost, the greater part of them, refused to accept payment for me.

Some months ago, in answer to an inquiry, I said that Mr. Forncrook had not commenced any suit against me, but only threatened. To be consistent, perhaps I should tell you now that he has commenced, and lays his damages up into the thousands. It is not a personal matter either; for, if I have made no mistake, he claims the right to monopolize the manufacture of all honey-boxes made from one piece of wood. That there may be no mistake about the matter, I copy from his circular and advertisements, as follows:

> The patent covers any section made of one piece of wood, of whatever description; therefore, we hope manufacturers and dealers will govern themselves accordingly.

Now, the great point with me is to be sure that my cause is a right and a just one — to be sure that I have a right to ask God to help us resist this, as it seems to me, an attempt to blackmail the bee-keepers of our land. A patent has been granted to Mr. Forncrook for a one-piece section, as has been heretofore explained; but he broadly claims, as you see, all honey-boxes made of one piece of wood. I have pointed out to you before the description of a one-piece honey-box, given in GLEANINGS away back in 1876. I give a reprint of the letter below:

SECTION FRAMES AND HONEY BOXES.

Ed. Gleanings:

I see by GLEANINGS for March, that J. I. Johnson, Palmyra, N. Y., asks a preventive of bees running the combs together in section boxes. I will tell you what I did last summer, and it worked to a charm. I had 8 stands of bees in double hives, my own make, Quinby suspended frame, 20 frames in hive. I made 100 lbs. box, 150 in sections, and 50 extracted honey. I live on a public road, and people constantly passing wanted a few pounds of honey; of course, they had nothing to hold it. Well, I thought about a section box; I could get nothing to make them of easily, so I got some peach-box covers and some strawberry-box stuff, and ripped them up in one-inch strips (I suppose you know how a strawberry-box is, cut half through at each corner, and nailed at one side; but the veener must be wet over night before bending; it then works nicely). I then put a piece of comb in the top, 1 inch square (would prefer drone comb if white); in some I stuck little bits of wax along the under side of top. When filled they weighed from one to two lbs. each. Only two sections out of the 150 lbs. were connected. I sold all my honey at the house, for cash, comb honey 25 c., extracted 20 c. I had more demand for the little sections than any other. I put the sections in the frames both in the front and back of the hive. I think the comb foundation for the sections a grand hit. One hive made 90 lbs. comb honey. Besides the 300 lbs. honey, I had 6 swarms from the 8 hives, making 24 all in good order to start with this spring.

ALEX. FIDDES.

P. S.—I may say that I put sections on top, but frost came about the middle of Sept., and there was no more honey.

Centralia, Ill., March 8, 1876.

Besides this, descriptions of sections made of one piece of wood are found all along through these years past. In April No. of the *American Bee Journal* for 1879, we find the following:

Mr. E. H. Wynkoop, Catskill, N. Y., has sent us a section for surplus which he calls the Gilbert Section. He says it is patented by a Mr. Gilbert of that town. It is similar to the one made by Lewis & Parks, though not nearly as nicely made, and is but a trifle thicker than the ordinary berry-box material. The corners are gouged out and then it is bent to place. Dr. Southard, of Kalamazoo, Mich., has used such for sections for years. Mr. Wynkoop has made arrangements to make and sell these sections. They can be produced cheaply, but we prefer something having a little more strength for comb honey.
—*American Bee Journal for April*, 1879.

And on writing to friend Wynkoop, we find that these sectional honey-boxes were made as long ago as 1873. The section is virtually the same kind of a honey-box as that made by Mr. Forncrook, only that it contains no slot for holding the strip of fdn., and this we have never used on the one-piece section, and do not want to. A patent was given the parties alluded to, years ago, for this plan of making boxes of one piece of wood. Friend Fiddes, whose letter I have given above, made these sections as long ago as 1875, and sold considerable crops of honey in them. They were made of thick strong wood, and had entrances cut for the bees, exactly like those made nowadays. Besides using them himself, he made them and sold them to his neighbors, and one of his neighbors also manufactured them, and sold honey in them. Without taking time to enumerate all these cases that have come to light, I give the letter below, showing that so prominent a man as our friend Quinby used such sections some time before he died. A picture of the way in which they are used is given in the *American Agriculturist* for February, 1875, page 52.

Friend Root:

I saw all-in-one-piece sections in Oil City as early as 1869, at one Mr. Stevenson's apiary. They were used by Mr. Quinby previous to that. I think Mr. Stevenson got his idea from him. The sections were made of very thin basket stuff. I sent my brother at Pioneer, Venango Co., Pa., a lot of basswood plank to cut into one-piece sections as early as 1874; he cut the V-shaped grooves with a barrel-marker. J. McGONNELL.

Waterford, Erie Co., Pa., May, 1883.

And now, my dear friends, does it not seem to you that my cause is a just and a right one? Is it possible that I have a wrong and selfish purpose in thus resisting Mr. Forncrook's efforts to monopolize this industry? In other words, have we a right, for it is a common cause, to pray that God may aid us in the cause of right? Will he desert us here? In the language of the opening text, "He trusted in the Lord, that he would deliver him." And will God deliver us?

You may say it is a plain and simple case; there is no need of being troubled or alarmed; but, dear friends, we are told that this is a case before the United States court, and we must go to law. Plain and simple though it is, I am told that an expensive lawyer must be employed to conduct the case. I do not know whether Mr. Forncrook is a Christian or not. I know that I claim to be, and stand before the world as such. Have you ever read the 6th chapter of I. Corinthians? Let us look at it a little.

Dare any of you, having a matter against another, go to law before the unjust, and not before the saints?

Paul seems to take it for granted, as you will observe, that most of the lawyers to be had in those times were not in the church, and he seems to intimate, too, that some one in the church, pastor or some good deacon, ought to be able to settle quarrels, as well as lawyers. I have always done this, friends, and about the first thing I did was to take the case to my pastor. He frankly told me that, in a matter that was to come before the United States court, he felt unable to advise. We agreed that we wanted a Christian lawyer. Now, I really hope that my brethren of the bar will not feel hurt by any thing that I may say in my ignorance or awkwardness. I do not know lawyers very well; but I do know that some of our kindest and best friends among our customers have "Attorney at Law" printed at the top of their letter-heads; not only kindest, but wisest. I am always glad to get a letter from a lawyer, because he always seems so clear and bright — he always seems to have such a command of language, and reasons so intelligently. I love and admire intelligent, intellectual, and educated people. I love my friends of the law, as far as I know them. As I read their letters over day after day, I fall to wondering, can this man be a bad man? is he not a Christian? Why, it seems to me he must be. I wonder if he charges $10 a day for helping people who need help in his line; and when he is sent off to some distant city, does he always put up at the hotels where they charge $3 a day or more? and do common people like you and I have to work a week to get money enough to pay him for just one day's time in settling a quarrel we may have got into? If he does, I think I shall try awful hard not to get into any more quarrels. In fact, I wouldn't quarrel now; I would give Mr. Forncrook almost any thing he wanted, rather than have a great big lawsuit, providing I could feel quite sure that we should not be paying a premium to dishonesty and fraud, and also if I were the only party concerned. It may be better to give a couple of thousand dollars to lawyers than it would be to give it to your neighbor who is overreaching and grasping. But I am not quite satisfied on the point. How I have longed for some good, wise, able adviser in these days past! Oh how I should love to present the whole matter to dear, kind, good old Paul, and ask him what I should do! If I could find an able lawyer who is full of the spirit of the Master, and was seeking every day to do his will, how gladly would I put it into his hands, and tell him to manage it for me! But, dear friends, now please excuse me if I am uncharitable or ignorant; I have not yet been able to find such a lawyer. There are those who are professing Christians, but they do not seem to be the proper ones to cope with a problem like this. There are others who, it would seem, have the ability, or, at least, pretty near the ability, needed for the occasion; but, alas!—Paul says,—

I speak to your shame. Is it so, that there is not a wise man among you? no, not one that shall be able to judge between his brethren?

And again, —

> But brother goeth to law with brother, and that before the unbelievers.

You see, friends, Paul tells us what we should *not* do, but did he tell us exactly what we *should* do? What is to be done, and who will advise me? James tells us, —

> If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not; and it shall be given him.

Well, friends, that is just what I have done. I have felt the need of wisdom and of able advisers, and I have prayed over and over again about them; and in doing so this little text at the head of our chapter has come to my mind.

> He trusted in the Lord, that he would deliver him.

Well, what is the result? Will God take my poor weak wisdom and use it? Will he enable me to stand before the courts of law, and before the judge on his bench, in a way that will help the truth to come out? Is there justice to be had at the courts of law? or are the stories true that we have heard, about bribes and chicanery, and trickery and injustice? Is there honor among our fellow-men when we get out of the province of bee culture and come into the courts of law? I believe there is, dear friends; I have faith in my fellow-men; I have faith in those sharp, witty, able ones among us who write us these good letters I have been telling you about; and I have faith in education and intelligence; I have faith in our republican government; I have faith in our land of liberty. Above all, I have faith in God; and I do also believe that little text that says, "Him that cometh unto me, I will in no wise cast out."

I have all my life enjoyed looking into the different trades and industries. I am passionately fond of following the details of any profession or trade. At one time I took so much interest in medicine that our family physician used to point out to me strange cases; and I was once with him when a human body was dissected to find out what was the matter of the heart of the deceased. We found that the valves had ossified so they would not shut closely. A knowledge of the human system, obtained while anatomy was a hobby, has been of great benefit many times in life. I have worked at many branches, as you know; and in our manufactory, in order to carry on successfully all the trades we do here, I have been obliged to learn personally a great many of the different trades. When GLEANINGS was first printed in our own office, I set type, and also learned to run a press. All these different experiences have been of value in giving me a general knowledge of all that is to be done in this world. Well, through it all I have never had occasion to touch on law. Perhaps it is on this account that I am not only ignorant, but that I am uncharitable; and it is on this account that I know so little of politics, and the affairs of government and state. Now, may it not be that God in his mercy and kindness is leading me where I ought to be led? and is it wise or well to complain, even though I should be torn away from my plans and work here, and pushed out a little more in the world?

He leadeth me! oh blessed thought!
Oh words with heavenly comfort fraught!
Whate'er I do, whate'er I be,
Still 'tis God's hand that leadeth me.

And now to close with, I want to give you some words from David that I gave you about a year ago.

> But let all those that put their trust in thee, rejoice: let them ever shout for joy, because thou defendest them: let them also that love thy name be joyful in thee. For thou, Lord, wilt bless the righteous; with favor wilt thou compass him as with a shield.—Ps. 5: 11, 12.

Tobacco Column.

I HAVE been trying to get along without GLEANINGS, but I must have it, if I should do without butter and tobacco, and I am a dear lover of both of them. The bees in our county are doing well this summer. Every colony gave forth a swarm, and many of them swarmed twice. Our county is covered with white clover; new honey is now retailing at 12 c. in the country stores. I think there will be a large amount of honey this fall. I have worked up an interest in bee culture in this county, and now everybody is getting bees, but nearly all common dark bees — a few Italians. My neighbor, Frank Scott, has 36 stands of bees for sale; they are all common bees, and one Italian; he asks $5.00 per colony, and I can buy around the county for from $3 to $5. I find in GLEANINGS that you are no friend to tobacco. Well, now, if I were your superintendent, or your clerk, and you saw me use tobacco, would you discharge me on that account? I base my excuse on Romans 14 : 14. In closing, I will add that I have been a member of the M. E. Church for 23 years; in politics I am a Republican; by profession, a stucco plasterer. JOHN CLINE.

Watson, Ill., July, 1883.

[The "uncleanness" referred to here by Paul is the ceremonial uncleanness of certain articles of food, condemned by the law, and not the *positive* uncleanness of tobacco, which defiles the body, the temple of the Holy Ghost. My reason for *not* using tobacco is in the verse just before and just after the one you quote. Now to come right down the point, do you think Paul would approve the use of tobacco if he were now here? Think of the apostles lighting a cigar after a sermon! your use of Scripture would justify nearly all the sins ever committed, provided one thinks they are "pure." Do you know that the use of tobacco shuts a man out from entering the ministry of your church?]

Friend C., the above was written by our proof-reader. And now let me tell you a little story of yesterday. One of our boys who has lately united with the church also gave up tobacco. The craving for it became pretty hard, and in an unwary moment Satan persuaded him that there was no particular harm in it—that he could be just as good a Christian and use tobacco, and so he took a "chew." But the chew did not give him the comfort he expected. In fact, he felt worse after than he did before. So he confessed his fault, and decided to try again. Now, the point is here: I would not dare tell him he could not be a good Christian and still use tobacco; but I pointed out to him all the small boys here in the factory. Said I, "My friend, if you decide that tobacco does not harm you, we must decide also that it would not harm them. Look at their bright young faces. I appeal to you. Will it be a good thing for them to commence using tobacco, now or at any other time?" The above may not have been the exact words, but that is the substance of them. He looked at me smilingly, and answered promptly, "No, Mr. Root, it would not be a good thing for them to commence using tobacco."

To him that esteemeth any thing to be unclean, to him it is unclean.

Now, our young friend decided unhesitatingly that tobacco would be unclean, especially for those boys; and therefore it was for him, considering his influence, also unclean; and he, as he stood there before God, whom he had promised to love and obey, thought he ought not to use tobacco. How about the small boys in your vicinity and neighborhood? Just one more point, friend C. If you were my superintendent, and had been using tobacco before our regulations commenced, I would not discharge you; in fact, I have never discharged anybody for using tobacco, that I know of. But I have declined to employ, in the first place, quite a number because they used tobacco and did not choose to give it up. To discharge a man is a hard thing to do, and should never be done without very good and grave reasons, in my opinion; but to decline to employ one in the first place is a right that no one would think of disputing.

Last summer a negro, good old crippled Christian Peter Henderson, near here, got me to start him with bees, to try if he could raise part of his living that way. He wanted a smoker, and chewed and smoked tobacco. He learned from GLEANINGS I lent him that he could get a smoker if he quit; and if I would vouch for him he said he would try. I told him to hold out till this spring, and I'd do it. I had given up smoking the weed myself, after a siege of 25 years at it, inveterately, but was using it, in a small way, in my mouth. I told him we would double teams on you, so I quit chewing, and he was to have the benefit of both cases. Now he triumphantly claims it on a nine-months' trial, or "probation," and says he is safe. You may send one of those old cheap ones I see in "baby" GLEANINGS this month; that will do. He is a good old creature, and poor as poverty, but makes his living, lame as he is, and his old wife's too. If he gets it, there will be joy in his black neighborhood. He is one among the few old slaves I ever saw that would try to keep bees. A. W. BRYAN.

Hot Springs, Arkansas.

Most gladly we send our old friend a smoker, friend B.; and we send him a brand-new one too. May God bless him and his neighborhood; and may he help us to elevate all of that class, and draw them out of their depths of ignorance, intemperance, and sin. Give my respects to your old friend, and tell him I will pray for him.

KIND WORDS FROM OUR CUSTOMERS.

Now, brother-readers, let us nudge our editor a little in regard to that fine boy of his. Some of the rest of us have fine boys, but have not the press at our disposal as he has. Now, I will suggest that Amos just imagine how his baby's name would sound pronounced backward, thus — Root Peter. NIGER.

THAT HUNTER SIFTER.

Well, to make a long story short, I don't know how people keep house without it. J. NOBLE.

Eureka, Wis.

Please send me half a dozen cold-blast smokers. We are using them to throw the fumes of sulphur on the cabbage and watermelon lice. They cook them, "you bet." J. L. MULKEY.

Sherman, Texas, July 12, 1883.

Though I have never written to you, I have known you through GLEANINGS since 1880. My sister, Mrs. St. J. F. MOORE, and myself, a silent partner, have now 91 stands of bees. This has been a very favorable year. Cotton is in bloom now, and the bees are going for the nectar. J. H. WILSON.

Monroe, La., July 13, 1883.

The CALENDAR CLOCK arrived all in good order. I would have acknowledged receipt sooner, but wanted to try it a short time first. To say that I am pleased with it fails to convey the proper idea. I would not be without it now since I have seen it and tried it, for double the cost. The weather is dry yet. Bees are doing nothing; have doubled back to 70 colonies.

Luling, Texas, July 27, 1883. J. S. TADLOCK.

You have proved yourself more than prompt, as I sent for two queens and you sent me five. All right; I had thought I would not buy any more than the two; but as the five came, I destroyed 3 black queens, and made room for the five. I have now concluded to send for three more. W. S. PECK.

Syracuse, N. Y., July 28, 1883.

Friend Peck, you give me more credit than I deserve. You see, it happened this way: We were overstocked with queens, and in order to get them out of the way we risked sending a few more than were ordered, where the letters seemed to indicate that the parties could use them. In your case we hit the nail right on the head, as you see; but we do not always do it where we take such liberties. Thank you for your kind words.

The supplies that you sent me came all right, and in good order, and I would say they were the most satisfactory lot, and best, that I ever got from any one. The sections are better than I expected, and they all give the best satisfaction that could be asked. I don't know how to praise them as much as I would like to, after using other men's make — thick and hard to put together, and then not fit in frames; and when you make frames to hold them, not fit in boxes, you may have some idea how I like the ones I got from you. You have my best thanks and good wishes. THOS. HOEY.

Salineville, Ohio, June 20, 1883.

Well, I declare, friend H., your kind epistle is refreshing. It seems to me we have had more complaints of sections than any summer before. This is very likely owing to the fact that we have been less able to give them our personal supervision than we have done in former years. I am very glad indeed that they pleased you.

There are several persons taking GLEANINGS in this vicinity, and they all claim it to be a great help to them in the management of their bees. I visited one of the parties a few days ago — Daniel P. Hubbard. He has a small town of A. I. Root's chaff hives. It is the nicest sight I have seen for some time. He told me he had 20 this spring, and had increased to 45 by natural swarming. I might say here, that he prefers a natural swarm to an artificial one. He has already taken over 20 gallons of extracted honey, besides over 500 lbs. in the comb. He is prepared to furnish Italian queens to any person wishing to purchase. I find, by his conversation, that he is well posted in bee culture. I have some of the chaff hives, and I am of the opinion there can not be too much said in praise of them. I think, by giving bees the attention that a farmer has to give his stock, they will prove much more profitable, to say nothing of the difference in the capital invested in the two occupations. The reason bees have not proven a success to some persons is because they give them no attention.

Graysville, Ohio, July 25, 1883. W. H. BOOTH.

All who see my smoker say it is the best one they ever saw, and are bound to have one; so I will send an order for five of Clark's cold-blast smokers.
JOHN E. BARNER.
Viroqua, Jones Co., Ia., July 7, 1883.

OUR FDN. MILLS.

The mills are beauties. I have named the 14-inch one "Jumbo." The saw-mandrel is a wonder for the money. Freight $6.60; very reasonable for 175 lbs.
W. W. BLISS.
Duarte, Cal., July 17, 1883.

The Clark fdn. fastener works to a charm. I have had some trouble with new swarms leaving their hives after being half full of nice new comb; but I think it was on account of extreme heat and no shade. I had no trouble after placing them in the shade.
J. S. DASKAM.
Kendallville, Iowa. July 12, 1883.

Fdn. arrived, and I can truthfully say it is nice, light-colored wax. And now, friend Root, I return many thanks. I can well say so, for you do every thing up so nicely, and send every thing so promptly, I believe that every one who deals with you will say so.
FILLMORE DECKER.
New Florence, Pa., July 8, 1883.

I really wish I deserved all your kind words, friend Decker.

Goods came last Friday, all satisfactory, and especially the extractor, which I am well pleased with. I now have 82 hives of bees; they did well on white clover, but it is now over, so we shall have to wait for Spanish-needle and big smartweed, which will be plentiful in two or three weeks, as we have had much rain.
WOOTEN HARRIS.
Hillsboro, Ill., July 24, 1883.

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Every thing came all right but those sponges. Husband looked at them and says they are small. I replied, "They will be all right when they are washed out." I put them in water, and, presto! they were as big as my head. Husband said, "We will cut them in two and make four; they are too large. Bees are working well on clover; fireweed is beginning to bloom.
MRS. NELSON KELLEY.
Ferndale, Wash. Ter., June 28, 1883.

ALSIKE, ETC.

I am well pleased with all you have sent me yet, and I am elated over the alsike clover I got by your recommendation of it in the A B C book. I got 6 lbs. of seed, and sowed 1¼ acres, and I think I shall never sow any other. It is from 3 to 5 feet long in the stock, and alive with bees, and all my neighbors want seed of it.
GEO. H. STOCKDILL.
Brattonville, Pa.

Instead of Bear Grove, Iowa, we are in Kansas, settled and started again with one swarm of bees. I am introducing GLEANINGS among all our bee-keepers, and expect you will get some subscribers from here. But that is not the point that I started out on. No, it is that wonderful, wonderful baby-boy. Now let us hear from him again in about six months, and then let the mother tell us who is "boss," Peter or Uncle Amos.
W. STANARD.
Louisburg, Kans., July 23, 1833.

Please send me as many of the Pilgrim's Progress books as you can for the money inclosed. The one I got in that little bill of goods has proven to be very interesting to my girl, 9 years old. I want this lot for my Sunday-school.
WM. FULLER.
Woodville, Wis., Jan. 28, 1883.

The book should be in the hands of every Sunday-school scholar, friend C., and you show great wisdom in your selection.

That queen you sent me proves to be a wonderful layer. You could not buy her back for $5.00.
JAMES W. MCCORD.
McCordsville, Ind., June 26, 1883.

Friend M., that we may not sail under false colors, I will say that the queen that you speak of was bought of W. J. Ellison, Statesburg, Sumter Co., S. C. Now, I will not say whether friend E. sends out queens like that every time, or whether that one happened to be extra. May be he will tell us.

THE TWIN SISTERS.

The A B C book came to hand all right. It was quite a surprise. We think it is a very useful book for bee-keepers. Its teaching are so plain that any child could understand it. Accept our thanks. I have twin sisters 5 years old; they have blue eyes and golden hair, and they look so near alike that we can not always tell them apart. Perhaps I will send you a picture of them some time this summer.
N. Ridgeville, O. LOUISA A. RINDSPACH.

I shall be very glad to see their pictures, friend Louisa.

Goods received in good order June 16, 14 days on the road; charges only 98 cents; am well suited with them; never had any thing from your establishment yet but what was O. K. I should have notified you of arrival of goods sooner, but the bees would not let me off. Please accept thanks.
E. J. SCHOFIELD.
Hanover, Rock Co., Wis., June 22, 1883.

But I tell you, friend S., it is not every one who can say that every thing they have received from our establishment is O. K. It is with sadness I say it.

TRANSFERRING BY DIRECTIONS IN A B C.

We transferred one swarm of mostly Italians into the Simplicity hive very successfully in 2 hours, having one to assist me; did not get stung, barefaced and bareheaded. The hive is well named, and deserves the highest commendation. By the aid of your A B C book we are able to manage our own bees without hiring experts. We can make our own hives like yours, but it will be best for us to buy the comb-frames and sections of you; but we would rather have just the prepared material sent — wooden strips, and tin corners, etc., ready to put together, as expressage will be less. It was $1.95 on one hive — too high, I thought.
L. D. BROWN.
Montmorenci, Ind., July 18, 1883.

Every thing you send out is such good value for the price you sell them at, that any person who would fail to send any overplus due you would be very mean indeed.
WM. CAROTHERS.
Grayville, Ill.

I am very much obliged for your good opinion, friend C.; but I am sorry to say there are a good many who do not agree with you. It is true, that I have tried to sell goods to you at a small profit, and I try to economise the machinery for doing business at as little cost as possible. It is not often that we find any one who refuses to pay the little balances that may accrue; but there are a few.

HOPE AND CONFIDENCE FOR CAPITAL.

Now for just a little chat. I am a bee-keeper, just got built up to 102 swarms, spring count. I need lots of the goods you describe, but have got to go slow to support a family and build up an apiary at the same time, and that, too, with no capital except a pair of good hands, a big bump of hope, and almost unlimited confidence in bees in my range. I have been a long time building up. I had lots of experience, and am now quite a customer of yours, though you don't know it. Your extractor, A B C, smoker, etc., are getting plenty of "biz" this year at my hands. I find 100 strong colonies in this range can furnish lots of shuffling for one bee-keeper; but I have been boss of them this year, and they will repay me well.
C. WATERHOUSE.
Bayou Chene, La., July 25, 1883.

QUEENS IN WINTER, ETC.

If I buy an imported queen from you, will you take queens raised from her in the months of Jan., Feb., March, and April? For the last two years I have raised them in my apiary, and queens raised in Jan. and Feb. are as prolific as any raised under the swarming impulse. I know it is rather early to ask the above questions; but you know I live a long way off; andto raise queens in large lots, I shall have to order many things that can not be got here.

The labels came to hand before I expected. You must work day and night, to fill orders so promptly.
Key West, Fla., July 6, 1883. G. A. DE LONG.

Friend L., we can not use many queens in January, February, or March; and, in fact, we seldom have many calls for them in April; but I have given your letter here because there may be friends among our readers who will be very glad to have some queens from you. In regard to selling imported queens and taking others for pay, we have found by past experience that by far the best way is to buy for cash and sell for cash, and it really amounts to the same thing as swapping. I shall be very glad indeed to contract with you for May queens in the latter part of April or during May; for we have never yet been able to supply the demand during these months.

Let me say, the things we get of you are generally so satisfactory that I do not feel like paying any attention to it, if some small thing fails to be equal to what we expected. Please accept our thanks for what you have been the instrument, in the hands of the Lord, to help us in.

THE "JOYFUL" POSTOFFICE.

We have just started a new postoffice at our house called Joyful, and we hope we shall all so live in obedience to divine laws that we shall never have any more sickness; but right here in this notoriously ague country, demonstrate the glory of God by being joyous all the time. We hold that a person has but little if any more right to be sick than drunk. We have 5 lodges of I. O. G. T. in the county, and established a Band of Hope, which we hope will do good work. Isaac B. Rumford.

Joyful, Kern Co., Cal., July 12, 1883.

Friend R., I should think that would be a very good kind of postoffice to have. But are you not just a little bit funny when you say that a man has not any more right to be sick than he has to be drunk? I should think that would be a very good doctrine for one who is quite well. But if I should happen to come some day when you had the toothache, what would you say then? I sincerely *hope* you are right about it.

MY BOY'S "TICKET."

I am glad you are to have an opportunity to vote on the prohibition question in your State. You know we thought we had settled that question by a majority of nearly 30,000, which our Supreme Court has set aside on small technicalties. Perhaps we may not question the honesty of the judges; but temperance people have their own ideas all the same. We avoided one of the difficulties which trouble friend Hasty, by having the election entirely separate from all election of officers, thus making it purely non-partisan; and I think the result proved the wisdom of the course.

But I sat down to relate an incident which occurred in an adjoining county at that election. An old toper came up to the polls, and, with unsteady hands, selected two tickets — one of each kind. Holding up a whisky ticket in one hand he said, "That's my ticket;" then holding up a prohibition ticket he added, "That's my boy's ticket. I'm going to vote my boy's ticket to-day." And he did.

Politicians generally watch eagerly for the election returns from Ohio. You may be sure temperance people will do so this fall. The W. C. T. U. canvassed this State in the same manner your sister speaks of.

Since the decision of the courts, the Republican party have taken it up, and the Democrats have declared for free whisky, so it is driven into politics in this State. Burdette Hassett.

Howard Center, Iowa, July 14, 1883.

KIND WORDS FROM TEXAS.

This is to inform you that my goods came, which were ordered a long time ago. They came safe and sound, and just as I ordered them. They came too late to do me much good this season; but I am satisfied. I can use the goods next year. If I had known that you were so far behind on orders, I would not have ordered at all; but when I read in Gleanings about your troubles, and complaints against you, it made me feel as if I wanted to help you; therefore I can not complain about my order.

It has been said that Texas beats the world for honey; but I hardly believe this is true every year. This year has been the poorest honey season that I have seen here for 18 years. I have commenced to keep bees with the late improvements, and people make light of my business, and say that I will never accomplish any thing. Well, I may not accomplish any thing; but I pay no attention to their talk, and work quietly and easily. G. W. Beard.

Milano, Milam Co., Texas, July 18, 1883.

Friend B., you are kinder than we deserve. I am very much obliged to you indeed for your consideration in overlooking the delays and damages we have caused you. In your closing sentence you have struck the right spirit exactly. Quiet, steady work is an argument that can never be answered. If you took the advice of those who find fault, and croak, if that is the proper word, you certainly would never amount to any thing; but if you stick to the bees, as you propose, you will surely receive your reward. If your friends are interested in the matter, lend them a number of Gleanings, and ask them to read Reports Encouraging. If they never bring them back, just let us know, and we will replace those that are lost. We are always glad to give away sample copies of Gleanings; and if our friends give them away themselves, we shall be much obliged for the kindness. Whenever we find we have not enough for your purpose, we will just tell "Barney" to print a few more next time.

I want to return you thanks for your kind instruction in bee culture. I used my extractor last week for the first time; it works finely. I extracted 27 lbs. of honey. I tell you, it is nice. I sold some of it for 15 cts. per lb. My bees are doing well. I have 35 swarms. I shall extract more honey this week. I clipped my queen's wing, and divided the bees to keep them from swarming.

HOW TO MAKE AN ARTIFICIAL SWARM.

The way I do is to take 2 or 3 frames out of one hive that is full of brood, and brush all of the bees off and put it in a new hive, and fill up the hive with comb fdn., and then I take a hive that is full of bees, and move it away 3 or 4 rods, and set the new one in its place. I do it in the morning, say from 9 to 11 o'clock; and by 4 I have a good swarm of bees in the new hive.

STARVATION DURING THE HONEY SEASON.

Will bees turn all their brood out of the comb when they are starving? I had one this spring that tore all of their young bees out. I was looking through the bees, and all the rest were getting honey, and had lots to live on; and when I came to this one it was a sight to see. The bees had no life in them; they had killed all of their young bees, and had torn about half of them out of the comb, and then they had not life enough to do any more. They had no honey in the hive, and I fed them a week before they would show any signs of work. What do you think was the cause?

MILKWEED FOR HONEY.

We have a milkweed here that must be very good for honey. The bees work on it all day; it commenced blooming two weeks ago; it is very thick around here. It looks as if it would last for a month longer. Malinda A. Wilkins.

Seneca, Kan., July 15, 1883.

My friend, it was starvation and nothing else that was the matter with your bees, although it is a little hard to see how they came so near to a starving condition in July. I would suggest that they had been raising brood largely, and had taken about all the food that had been gathered, when several stormy days occurred, and they ran out of honey, and became so weak they could not go after more; therefore you would see some starving when the rest were storing honey. When at the last stage of starvation, they always turn upon the brood and suck the juices, and this is what you saw.—Your plan of making artificial swarms is a very good one, especially if you have a laying queen or a matured queen-cell to give them.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany .... —
Bee Entomology 524
Blasted Hopes .... —
Editorials 545
Forgettery .... —
Heads of Grain 536
Honey Column 518
Humbugs and Swindles 453
Ladies' Department .... —
Notes and Queries 543
Obituary .... —
Remindery .... —
Reports Encouraging .... —
Smilery .... —
The Growlery .... —
Tobacco Column .... —

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Alfalfa 540
Aspen, Quaking 540
Baskets for Hiving 519
Bees, Success with 525
Bees, To Make Stay 537
Bees and Broken Cb. Honey 531
Bees Hunting a Location 533
Bees 96 years ago 540
Bees before Entrance 538
Bees and Brimstone 536
Bees Clustering 540
Bees in Parks 535
California 540
Cans for Honey 546
Careless Agents 543
Combs, Finishing Unsealed 531
Conventions 546
Convention, Fares to 532
Corn, Honey from 539
Cotton, Mrs 525
Cotton, Honey from 543
Cyprians 531
Davis' Report 542
Doolittle 526
Drone-rearing 526
Drone Fdn. for Honey 543
Eggs, What Became of 538
Fireweed 538
Florida 529
Fountain Pump 519
Frames, Metal-Cornered 520
Frames, Wide 536
Frames, Wired 539
Fuel, Smoker 538
Hives, Chaff 531
Honey on Wheat-stubble 540
Honey, Sour 529, 539
Honey in Unwired Frames 537
Honey-dew, Crystallized 541
Honey-dew in Field 536
Hybrids vs. Pure 540
Hybrids 529
Italians vs. Disease 537
Int., Caution About 543
Int. Virgin Queens 519
Introducing 538
Langstroth's Letter 522
Muth's Change of Basis 536
Nectar in Canada 536
Ninety Miles an Hour 530
Obs. Hive, Three-frame 534
Pails, Dadant 542
Parsnips 543
Preparing for Winter 532
Queen Nursery 546
Queens, To Get Good 542
Queens, Clipping 519, 527
Queens Returning 539
Queen-rearing 526
Raisins 534
Raising Qs. near a Lay'g Q 540
Sabbath 531, 538
Section, The Manum 520
Solar Wax-extractor 521
Sourwood 537
Stinging without Cause 540
Swarms Absconding 527
Swarming, Natural 519
Sw'g without Clustering 543
Syrio-Italians 543
Underselling 537
Watering-places for Bees 537
White Caps 537
Who Shall Lose? 539

COOK'S BRUSH

FOR GETTING BEES OFF THE COMBS.

Sample brush, 18c.; ½ dozen, 90c.; 1 dozen, $1.65. See advertisement in June GLEANINGS, page 338. You will throw away the asparagus-tops, etc., when you use one of our manufactured brushes a day or two. T. J. COOK, NEWPOINT, DECATUR CO., IND. 8-9d

ITALIAN BEES

BRED FOR BUSINESS.

Warranted queens, each, $1.00; per half doz., $5.50; per doz., $10 00. Safe arrival and perfect satisfaction guaranteed. Send for circular. Address

J. P. MOORE, 8tfd
MORGAN, - PENDLETON CO., - KY.

The Excelsior Poultry Yards

are always well stocked with Pure-Bred Poultry and Italian Bees; Extractors, Foundation, Hives, etc., for sale. Job Printing of every description done cheap for cash. Circulars free.

Address J. T. FLETCHER, West Monterey,
12-9d Clarion Co., Pa.

JUST OUT!

New Circular, and price list of Bees, Queens, and STENCILS for bee-keepers' use. 4-9d
JOS. M. BROOKS, COLUMBUS, BARTHOLOMEW CO., INDIANA.

KEGS FOR HONEY, ALL SIZES
8-9d E. T. LEWIS & CO., TOLEDO, O.

[The following came too late for the Honey Column.]

I HAVE 20 barrels of choice white-clover, and 10 barrels fall or dark honey, for sale in any quantity desired, at reasonable rates. Barrels contain about 525 lbs. net. I can put it up in any shape desired. Correspondence solicited.
EMIL J. BAXTER, Nauvoo, Hancock Co., Ill.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2.00 per year.

Those whose names appear below agree to furnish Italian queens for $1.00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 7tf
*Paul L. Viallon, Bayou Goula, La. 7tfd
*S. F. Newman, Norwalk, Huron Co., O. 7tfd
*Wm. Ballantine Sago, Musk. Co., O. 7tfd
*D A. McCord, Oxford, Butler Co., O. 3-2
*Chas. R. Mitchell, Hawkinsville, Pulaski Co., Ga. 7tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
*Dr. A. B. Mason, Wagon Works, Lucas Co., O. 2-8
*Jas. O. Facey, New Hamburg, Ont., Can. 7tfd
F. J. Wardell, Urichsville, Tusc. Co., O. 3-9
*J. H. Reed, Orleans, Orange Co., Ind. 7tfd
M. Isbell, Norwich, Chen. Co., N. Y. 4-9
*C. C. Vaughn, Columbia, Maury Co., Tenn. 4-8
*J. W. Keeran, Bloomington, McLean Co., Ill. 4-9
*Oliver Hoover, Clyde, Sandusky Co., O, 5-10
*Ila Michener Low Banks, Ont., Can. 5-10
*D. G. Edmiston, Adrian, Len. Co., Mich. 8tfd
*F. G. Cartland, High Point, Guilford Co., N. C. 7tfd
*Jas. A. Nelson, L. box 83, Wyandott, Wy. Co., Kan. 6-5
*S. P. Roddy, Mechanicstown, Fred. Co., Md. 7-8
*Wm. K. Deisher, Kutztown, Berks Co., Pa. 8-10

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 7tfd
L. E. Mercer, Lenox, Taylor Co., Iowa. 4-3

Headquarters IN THE South,

FOR THE SALE AND MANUFACTURE OF

BEE-KEEPERS' SUPPLIES.

Root's Simplicity, and V. D.-N. hives, frames, sections, foundation, etc.; Italian queens and early 4-frame nuclei a specialty. See advertisement in January, 1883, GLEANINGS; and for further particulars, send for my Illustrated Catalogue.

25 cents cash, or 27 cents trade paid for beeswax.

P. L. VIALLON,
7tfd BAYOU GOULA, La.

SAVE YOUR FOWLS. SAVE TIME and MONEY.

FANCY POULTRY, POULTRY POWDER, ITALIAN BEES, BEE-HIVES, &C.
6tfinq For circulars, address
J. R. LANDES, Albion, Ashland Co., Ohio.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

MILWAUKEE.—*Honey.*—This market is not very lively on honey, and the demand is not large. But I expect, as cool weather comes on, it will be wanted, and shipments can be disposed of to good advantage. Choice white comb in 1-lb. sections, quotable at 18c per lb.; white comb in mixed or larger packages, 15@16c. Extracted white, in small packages, 11c; in large, 10c. *Beeswax* in some demand. Choice quality would bring 30@35c. A. V. BISHOP.

81 & 83 Detroit St., Milwaukee, Wis., Aug. 13, 1883.

CLEVELAND.—*Honey.*—New 1-lb. section honey of first quality is in good demand, selling at 18 to 19 cts., as fast as it arrives, no stock accumulating. Second quality not so salable, and stock does not move off so readily at 16@17c. Extracted not inquired for; no new stock in market. *Beeswax*, none offering.

Cleveland, O., Aug. 21, 1883. A. C. KENDEL.

CINCINNATI.—*Honey.*—The demand for extracted honey is exceedingly dull; for comb honey, only fair. Arrivals are plentiful. Stocks are large in the hands of commission merchants and others. Our own supply is larger than ever; and for the present, we can not compete with commission merchants. We may have to offer lower figures. Our price so far was 7@9c for extracted honey, and 14@16c for comb honey on arrival. *Beeswax*, arrivals are good at 25@28c. Demand is fair. CHAS. F. MUTH.

Cincinnati, O., Aug. 21, 1883.

ST. LOUIS.—*Honey.*—Large offerings of California comb honey caused great depression of values here at opening of season. Prices are, however, rapidly recovering, enabling us to place choice comb honey, in neat clean packages, from reputable apiaries, at 17@20c per lb. Extracted still moves slowly at 7½@8c per lb. in barrels; 9@10c per lb. in 1 and 2 gallon cans. Extremely warm weather still causes consumers to limit their purchases to their most immediate wants. With cooler weather we look for largely increased demand and values for all classes of honey. *Beeswax*, quotable at 27c per lb.

W. T. ANDERSON & CO.

104 N. Third St, St. Louis, Mo., Aug. 22, 1883.

NEW YORK.—*Honey.*—We quote: White clover, 1-lb. sections, 20c; 1¼-lb. sections, 19c. Buckwheat, 2-lb. sections, 13c; 1-lb. sections, 14c. No changes in extracted honey, and no arrivals of new comb honey yet. *Beeswax* is plentiful, and holds steady at 29@30c.

H. K. & F. B. THURBER & CO.

New York, Aug. 22, 1883.

BOSTON.—*Honey.*—One-half-pound sections, 25c; 1-lb. sections, 20c; 2-lb. sections, 18c. Extracted, 8@10c. All of best quality. CROCKER & BLAKE.

57 Chatham St., Boston, Mass., Aug. 22, 1883.

DETROIT.—*Honey.*—New honey is beginning to come in freely, though the demand has improved but little if any. A good article is offered at 16@18c; but little has been sold yet. *Beeswax*, firm at 28@30c.

Detroit, Mich., Aug. 25, 1883. A. B. WEED.

CHICAGO.—*Honey.*—The trading in honey is fair for the season. Values are without change from last week. There are no orders for pound lots of comb or extracted on the market; hence, prices vary. Choice white-comb, 1-lb. sections, 18c; 1½ to 2 lb. sections, 15 to 17c. Dark, no sales being made; extracted, 8@10c per lb. as to quality and amount taken. *Beeswax*, quiet at 28@35c. Receipts moderate. R. A. BURNETT.

161 South Water St., Chicago, Ill., Aug. 24, 1883.

OUR MARKET REPORTS.

What is the reason your city honey-market reports are so slim? We fellows in the West would like to see you give the markets of St. Louis and Chicago, as these are our main points to ship to. Please give us the markets of these two places, if it is not asking too much. J. E. WALCHER.

Millersville, Ill., July 20, 1883.

Ed Gleanings:—Permit me to inform you of my withdrawal from the house of H. K. & F. B. Thurber & Co. There is no doubt that there is needed a strictly *honey and beeswax* house, whereby products can always be obtained, and consignments made by producers to best advantage. My long experience as manager of this department for the house of H. K. & F. B. Thurber & Co., familiarity with the honey trade, and my connections with all principal bee-keepers throughout the country, enable me to understandingly establish a honey emporium where all the bee products can be handled to best advantage; and I desire to thank friends for their confidence and patronage in the past, and to direct them to the excellent advantages and facilities I now offer in establishing a business where goods in this special line will receive undivided care, management, and attention. Any goods intrusted to our care on commission will be disposed of at the highest market prices, and prompt returns made. Soliciting your patronage, and hoping for favors from old friends, I remain yours truly,— JOS. M. MCCAUL.

80 Hudson St., New York, Aug. 27, 1883.

Wanted, a few crates of honey; also 2 or 3 kegs of nice extracted honey. Send sample and price, to be delivered at depot here. JAMES S. CASE.

Colchester, Conn.

Who can deliver me 400 or 500 lbs. of choice white-clover comb honey in one-pound boxes? I will pay 15 cts. per lb., delivered here. S. WHAN.

Raymilton, Venango Co., Pa.

I should like to buy 200 lbs. of extracted clover honey, for which I will pay 9c per lb.

Eagleville, Ashtabula Co., O. C. L. PAYNE.

I have about 1000 lbs. of nice comb honey, white clover, which I should like to dispose of very soon. Do you want it? Please let me know soon, stating price. FAYETTE KEITH.

Dundee, Ill.

I have on hand about 75 gallons fine extracted honey. Please let me know where I can find market for it, and what it will bring. My honey is in small barrels. J. F. WILLIAMS.

Warsaw, N. C.

How is the price of honey in your neighborhood? I am almost discouraged. We can not get over 12½ cts. for the very best one-pound boxes. Can not the Bee-Keepers' Association make and keep a standard price for honey? How do you dispose of your stock? E. E. DEYLER.

Black Ash, Henry Co., Ohio.

Wanted, 1000 or 2000 lbs. white-clover or linn honey, extracted, delivered at Des Moines; also about 1000 lbs. 1-lb. sections of same grade. State price delivered at Des Moines in good order.

Greenwood, Polk Co., Iowa. MILO SMITH.

Black and Hybrid Queens For Sale.

I shall have about 20 hybrid queens. If they are of any value to you, let me know. E. BAER.

Sterling, Ill.

I have a few hybrid queens which are almost pure; would sell them at 25c. Is there somebody who wants them? WM. K. DEISHER.

Kutztown, Berks Co., Pa.

I have 10 black queens which I wish to sell.

Afton, N. Y. O. J. RUSSELL.

THE VERY BEST
Italian and Holy-Land Queens; also Apiarian Supplies
at prices to suit the times. Circular free.
GEO. H. KNICKERBOCKER, PINE PLAINS, N.Y.
5-8d

GLEANINGS IN BEE CULTURE.
DEVOTED TO BEES, HONEY & HOME INTERESTS.
F. A. Whiting

Vol. XI. SEPT. 1, 1883. No. 9.

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Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18c per year extra. To all countries NOT of the U. P. U., 42c per year extra.

NOTES FROM THE BANNER APIARY.

No. 46.

POOR HONEY SEASON.

THIS has been about the poorest honey season we have had since I have been in the business. The spring was late and cold, the summer was cold and rainy, and the fall promises to be cold and perhaps dry. Well, we have the satisfaction of knowing that not a stone has been left unturned, and not an ounce of honey has been lost from neglect, or from lack of hives, sections, fdn., or fixtures of any kind. When the season is over, I will tell you what we have done.

THE FOUNTAIN PUMP

is an instrument I should not think of doing without, especially where natural swarming is allowed. We have saved at least two swarms with ours this season, besides "controlling" several more. We keep two large tin pails of water standing near the shop door, and the pump hanging near by, and thus are *always* ready for business.

CLOTHES-BASKETS FOR HIVING SWARMS.

We have two of the 25-cent splint clothes-baskets, lined with cotton cloth, and furnished with a burlap cover sewed fast at one side, and I would ask for nothing better in which to shake off clustering swarms. The hive is placed upon the stand that it is to occupy, the bees shaken into the basket, the cover "flopped" over, the basket carried to the hive, the bees shaken to the end of the basket by "chucking" it upon the ground, the cover turned back, the bees shaken down in front of the hives, and the job is done.

NATURAL SWARMING PREFERRED.

After having seen the ease with which bees can be managed when allowed to swarm naturally, the energy with which they work, and the excellent results that are obtained, I shall never, no, *never*, go back to artificial swarming; but I don't want any

QUEENS WITH CLIPPED WINGS,

as the few that we had of that kind gave us more trouble than all the others. In the first place, we have the queens to find and catch; but this, however, is the smallest of the bother; the bees roam around a long time, and sometimes finally cluster; and if another swarm comes out they are sure to join it. When the bees *do* come back they often go "piling" into the wrong hive, or perhaps *hives;* and if they *do* "catch on" to the proper hive, instead of going in they often cluster all over the outside of it. Sometimes, after the queen has been allowed to run in she comes out again, thinking perhaps that *she* hasn't "swarmed" yet. In *my* experience, a swarm having a queen unclipped will cluster, and can be hived, and be at work in that "whooping," "zipping," go-ahead style, in just about the same time that it takes a swarm with a clipped queen to make up its mind, sullenly and doggedly, to go back home. I presume that a swarm with a clipped queen feels very much the same as would a picnic party whose lunch-basket had been stolen, and, as a consequence, they had to come back and not have any picnic. The following is from friend Doolittle:

INTRODUCING VIRGIN QUEENS.

I have just read your article on Alley's book, friend H., in Aug. GLEANINGS, and note what you say about introducing virgin queens. Now, won't you tell us, in Sept. GLEANINGS, very *minutely*, just how you introduce those virgin queens as soon as you remove a fertile queen? By the Alley plan (waiting three days) I can get a part accepted, but I have lost more than 100 trying to get them in as soon as the laying queen was taken out, and never succeeded even *once*. G. M. DOOLITTLE.

Borodino, N. Y., Aug. 4, 1883.

Friend D., there is no trick or secret about it. As soon as the laying queen is caged I take the virgin queen by the wings and place her among the bees, at about the center of one of the combs. Usually, the bees pay no attention to her; if they *do* attempt to sting her, I smoke them, and then watch her and continue to smoke them until they let her alone, and I never yet had to watch one *more* than ten minutes, and seldom more than two minutes. I am well aware that nuclei that have been queenless two or three days accept a queen much more readily than do those from which a queen has just been taken; but in *my* experience, the percentage killed by introducing them without waiting is so small that it does not pay to wait. I have 130 nuclei this season, and I do not think that I have inserted half a dozen cells; all the queens have hatched out in the lamp nursery, and then been introduced. As a *general* thing, the laying queens have been caged in the afternoon, and the virgin queens introduced the next morning.

METAL-CORNERED FRAMES.

Friend Root, in your comments on my article in July GLEANINGS, you say: "Had you provided yours with some of the spacing-boards we describe and illustrate in our price list, you would have found it a very simple matter indeed." And in reply please allow me to say, had not the frames been metal-cornered, spacing-boards would not have been needed. Do you know what I did when I got those metal-cornered frames home? No, I suppose you don't; but you can easily guess. I just took the hammer and "smashed 'em" right around the ends of the top-bars, and then nailed another top-bar right on top of the old one. The frames were a trifle smaller than mine, otherwise I could not have done this, and should, I suppose, have been compelled to use the metal corners. Cyula Linswik and her sister do not like metal-cornered frames, and bought them, I *presume*, just as thousands of others have done, because *you* used and advised the use of them. Candidly, friend Root, do *you* like frames with metal corners? do you know of any good purpose that they serve that is not more than counterbalanced by objections? A nailed frame made from ⅜ stuff is strong enough, and then the top-bar doesn't sag, and diagonal wires and center-posts of tin are done away with. The tins cut the fingers. I know we can take hold of the frames nearer the center; but the frame back from the ends is more liable to be covered with bees, and it is not so convenient as to take hold at the projections at the ends. With metal corners we are not so liable to kill bees when putting back the frames. True; and this, I believe, is the only point in their favor. Now, I dislike to kill bees; but I am in the bee business to make money; or, if you will, to get my bread and butter; and when it pays to kill bees, I shall do it; but the number of bees that will be killed, even with ordinary care, in handling all-wood frames, is a very trifling matter indeed. When metal corners are *new* they can be picked up more readily than all-wood frames; but after the bees have their brace-combs completed, a frame has to be pried loose before it can be removed, whether there are metal corners or no metal corners, and it takes just about as long in one case as the other. In working for extracted honey it is well to have the *upper* stories made with metal rabbets; but in working for comb honey, even metal rabbets are not needed, nor advisable.

THE HEDDON, OR MANUM, SECTION.

Friend Root, you have probably learned, ere this, that I believe in "hewing to the line, let the chips fall where they may;" and for this reason I wish to enter my protest against the *intimation* that the sections sent out by Mr. Heddon are not thoroughly seasoned, and will shrink and easily tumble to pieces. Last winter friend H. sent me a sample. I gave it to the twins to play with, and after they had taken it to pieces and put it together again a few times it wouldn't stand alone, let alone being knocked off the window. The reason was, it had become so worn. Friend Walker put that section together and took it apart at least once, then you put it together, and *perhaps* it was taken apart several times; if so, it was *not* a fair test to knock such a section off the window. Now, let me tell what *I* did. I took one of friend Heddon's sections that had been put together nearly three months, and threw it up *ten feet;* and when it struck the floor it was thrown only slightly out of the square. I continued to throw it up, and the third time it came to pieces. You think Mr. Manum might make some one-piece sections of the same material. I fear not. I think the wood is too hard and brittle; but, of course, I may be mistaken. This hardness is a valuable quality, as it prevents the honey from soaking into and discoloring the wood. No, friend Root, and all the other friends, the section that friend Heddon sells *is* seasoned, and thoroughly seasoned too, and it never mildews as did some of the basswood sections that you told about last spring. W. Z. HUTCHINSON.

Rogersville, Gen. Co., Mich., Aug., 1883.

Friend H., are you not getting a little vehement, too? We make metal-cornered frames and all-wood frames, and like our customers to have which they prefer. In our own apiary we have tried, over and over again, to get along with all-wood frames, which we get every season in buying bees. But I never yet had a hand in my employ but that begged to be allowed to transfer all the combs in all-wood frames into the metal-cornered ones. Do you remember, that in the price list I advise trying one frame with metal corners before getting more? Difference in locality may have something to do with it. When I visited Cyula Linswik and her sister I found their hives so crammed with honey that metal corners and every thing else were built up solid. Furthermore, the combs were so heavy that the metal corners would hardly bear the weight of them. Now, we do not have this state of things in Ohio; or at least we do not allow bees to get so crowded for room that they fill up every thing in that way. Are not your remarks a little intolerant of the opinions of other people? Should I allow the protests that will come, from what you have said, a place in GLEANINGS, there would hardly be room for any thing else. We have great numbers of customers who are ordering metal-cornered frames year after year; and the present season the demand has been greater than ever before. As an illustration of how opinions differ, I would cite you this matter of introducing virgin queens, which you have just mentioned. Doolittle says he never succeeded even once: you say that your failures are so few that the loss of time in waiting three days is a much greater loss. Now, I agree with you; but what shall we think of friend Doolittle? As a great many agree with him, should we not conclude it lies mostly in the different ways we manage, and also in the different notions we have, and the different ways we have got used to?

I agree with you, that friend Heddon's section is a splendid one, and I have just been thinking about trying to buy 100,000 or more for next season's use. Still, I think the one-piece section will hang together under some circumstances when Heddon's would not; and Heddon's is a great deal more work to put together. I know our basswood sections mildewed because the lumber was not seasoned enough; but we are making preparations now to have sections enough for next season, put up months before they are wanted. As the bee-world has got to be a pretty large world, I am not sure we shall be able to do it; but we are going to try hard. It might be a good idea for many of the bee-keepers to have their sections made and in store, even this fall, for next season's use. I presume 100 manufacturers of sections would be glad to take orders now for sections at a low rate for next season's use. There ought to be manufacturers of sections, not only in every State, but in different parts of every State, to save expensive shipping rates, and also to prevent those who have, during the past season, been trying to fill orders, from being so overcrowded as we all have been. And you think you never want any more artificial swarming, friend H.? May I caution you again about being too positive? I rather expect to see you change your mind in a good many respects, and on a good many points, during the next ten years, if you will excuse so much from an old friend.

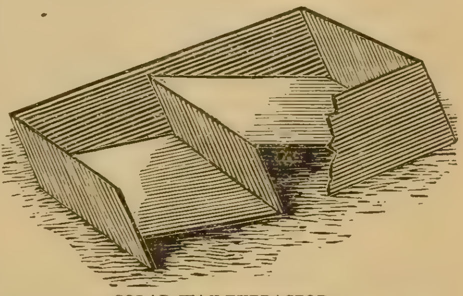
THE SOLAR WAX-EXTRACTOR.

A VALUABLE PAPER FROM FRIEND POPPLETON.

SOME seven or eight years ago I experimented with the idea of giving bees a flight in the winter by means of the sun's rays passing through glass. The story of these experiments might make interesting reading, but would probably be of no practical value to bee-keepers. These experiments, however, taught me the use of two of the most important fixtures in my apiary; viz., the chaff hive and the solar wax-extractor, both of which have been largely used by me since first learning their utility.

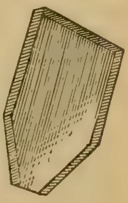
The solar wax-extractor seems to be a new idea to a great many bee-keepers, so I will give a description of the one I use, and some suggestions as to how to use it, etc. Mine is only a rough affair; one can be made by any person who can use a saw and hammer (except the tins from the tinsmith); but mine has answered my purpose very well. I am in hopes, however, that some ingenious mechanic who has the proper facilities will improve the shape or position of the glass so as to give greater heat, and make the implement more effective.

Mine is made of ½-inch lumber, planed and painted red (I think black would be better), but inch lumber would do just as well. It is simply a square box 40½ inches long, 25 wide, and 12½ deep, with an irregular bottom. The following is a side view of the implement, one of the sides being removed, showing the zigzag bottom.



SOLAR WAX-EXTRACTOR.

The highest part of the bottom is for holding the tin containing the combs to be rendered, the lower part holds the vessel that catches the drippings. The tin comb-holder is simply a sheet of any kind of tin, 20x28, cut in this shape: That is, two of the corners are cut beveling, and the entire outer edge of the tin, except the point, is turned up about ½ or ¾ of an inch, and the corners soldered, leaving an open place at the lower end of the tin, about two inches wide, for the melted wax and honey to flow off into the dish placed to catch it. This dish may be a common 10-qt. milk pan, or a flaring-top tin pail, the latter being preferable.



WAX-PAN.

I make a frame of the right size for holding a 24x40-inch glass, out of inch lumber; rabbet the inside edges of the frame, so the glass will fit in the rabbets and allow thin strips of the same width as are the pieces of the frame to be nailed over frame and edges of glass to hold the glass securely in its place. This is an easier and safer plan than to use putty. I use two thicknesses of glass, one on each side of the frame, which leaves them about ¼ inch apart. I do not think this is absolutely essential, but it furnishes more heat than does a single thickness of glass. If glass 24x40 can not be obtained, use two frames 20x24, letting the edges of the glass come together in the center of the frame or sash. I set the implement on any firm support that keeps the lower end one or two feet above the ground, and inclined to the south enough so the rays of the sun will strike the glass at as nearly right angles as possible. The tin comb-holder wants to be inclined so the melted wax and honey will run off freely, but not so much as to allow the bulk of the refuse matter to run off also. Mine has an incline of 1 inch in 5¼, which is about right. When I open the implement for any purpose whatever, I raise the lower end of the sash, slide it back until it overbalances, and let the back end rest on a post driven in the ground at a proper distance.

For dipping the melted wax into molds, I use a small tin cup, ½ pint, made with one straight side, and the handle nearly on top when the cup is laid on the straight side. Leave the straight side of the cup smooth, without either wiring or turning over. This all sounds like the description of a complicated implement, but it is really a very simple, crude affair. The expense of the material to make it should not be over $3.00, depending on the price of glass, and whether one or two thicknesses are used.

As simple as it is, the one I now use is the third one I made before being satisfied. The first was only for experiment, and satisfied me of its utility. The second was made of 3 sheets of 20x28 tin, soldered together, put into a box similar to the one I now use, only larger, and covered by some old windows that I happened to have on hand. This was too large to be handled easily, and the shadows of the pieces of sash that were over the wax were an injury. I found that it took so long to render a charge of wax that it would partly bleach, harming both color and quality. I then adopted the smaller size I now use, which has nothing that can cast a shadow on the wax while melting.

Now, what practical use is this implement to us? What are its advantages, and what its disadvantages? I do not think it will ever be largely used if at all, by those who have large quantities of old combs to render up; but I think it will be found invaluable to small bee-keepers, and to every one who produces extracted honey. Its chief advantages are the little time and attention its use requires, and the large amount of honey it saves from cappings.

In the morning, before commencing regular work in the apiary, I usually empty the vessel containing the honey and thin cake of wax left from the previous day's running; fill up the extractor, and pay no more attention to it until 3 or 4 o'clock in the afternoon, when I dip off the melted wax into moulds, and the last thing before quitting work at night, I take out the large tin, and clean off the refuse while it is yet warm.

Very few are aware how much honey is wasted by the ordinary method of rendering up the cappings. I first drain my cappings very thoroughly—more so than can be done in draining-cans, such as those described by Dadant in his pamphlet, and then get nearly or quite 2 lbs. of honey to one of wax. I save at least 200 lbs. of honey each year, that, by any other process, would be wasted. This honey is very thick, and would be of extra fine flavor but for the small amount of pollen that gets mixed with it while melting. I always put this honey into a separate barrel, notify the consignee that it is a different grade of honey from the rest, and to pay me what it is worth, and I have always been allowed the same as for other dark or mixed honey.

The one great drawback in the use of this implement is, that it can be used only on clear warm days, and this is a very serious inconvenience in this far northern climate. I think the further south one is located, the less this would trouble; and if I were located in any of the Southern States, I think I should use no other form of wax-extractor. When I first commenced its use several years ago I used to leave it open to the light several days at a time until the combs in it were all rendered out; but I soon found out that wouldn't do, on account of its bleaching and hardening the wax, and I now have a cover of thin boards that I keep over the extractor at all times, except when running, and never put any more comb in it at a time than I think will be rendered out that day. If at any time during the day the sky becomes cloudy, I cover up the extractor and finish that run the next clear day.

What may be an objectionable feature to some, is the fact that wax rendered by it is harder than that rendered by other methods. I can not see but the bees work foundation made from it just as quickly as from any, but it will require experiments by others who use fdn. made on roller or press machines to determine the facts.

When wax is kept for several hours at a time in a liquid condition, as is the case when using this implement, every impurity it may contain rises to the top, when it may be skimmed off, or it settles to the bottom, leaving the wax absolutely free from any foreign matter; and wax that has been properly handled in the solar extractor is as beautiful in color, and as free from all impurities, as it is possible for wax to be. O. O. Poppleton.

Williamstown, Iowa, August 21, 1883.

Many thanks, friend P., for your very plain and complete description of this scientific instrument, for it truly deserves the name. I, too, learned some to me very strange things when experimenting with bees under glass; and one of the strangest was the great amount of heat that will be developed under a double glass such as you describe. I have often thought it might be utilized for warming buildings, in place of burning so much wood and coal. Why has it not been done? We all know of the curative properties in the direct rays of the sun. Now, why not have a sort of playroom for the children done off on the south side of the house, to be warmed only by the sun's rays? Of course, we should not expect the children to frolic around in it in summer time; but even in the freezing days of winter such a room would be comfortable without a stove or fireplace. I feel a strong temptation to make these solar wax-extractors for sale; but when I think of the number of things we already offer for bee culture, I am almost afraid to start out on another thing. With your very plain description, perhaps our friends can easily make them themselves. And I believe it will be found a very useful thing for converting all sorts of refuse into nice bright wax.

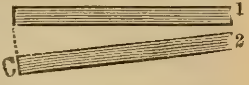
THE STANDARD LANGSTROTH HIVE AND FRAME.

SOMETHING FROM FRIEND LANGSTROTH HIMSELF IN REGARD TO THE DIMENSIONS OF THE ABOVE.

BEFORE inventing my movable frames I used bars, in a hive with movable top and bottom, by which the bars could be worked to much better advantage than by side-opening doors. My latest style of bar hives were 18⅛ by 18⅛ by 6 inches deep, all in the clear. At that time (1851), honey, to bring the best price, had to be in combs built in neat glassed boxes, and this shape of the hive gave an unusually large surface for such supers. The walls of these hives were double glass, to give the dead-air space, which protected the bees against extremes of heat or cold, and sudden changes of temperature. That fractional ⅛, which has puzzled so many, gave room for two strips of wood, each one inch wide by 1-16th thick, against which the double glass could be fastened with glazier's points. One pane of glass, 18 by 12, a common commercial size, could be easily cut so as to answer for one side. My movable-frame hives were first made in the spring of 1852, in the city of Philadelphia—some six months before the patent, which was applied for in January, was issued. These hives were 14⅛ inches from front to rear, and 18⅛ from side to side. Early in 1853 my hives were made in Greenfield, Mass., and the first edition of my book on the "Hive and Honey-Bee" was published in May of that year. The present size of hives, 18⅛ from front to rear, 14⅛ from side to side, and 10 inches deep, was then adopted. The dimensions, 18⅛ from front to rear, and 10 inches deep, have never been changed; but that from side to side may vary according to the number of frames, some preferring 8, some 10, and some even more. I am correctly quoted as having said, in the *American Bee Journal*, in reply to an inquiry, "Considering the accuracy which may be obtained in making the frames stiff and perfectly square, I prefer the Root and Newman measurements." What I meant was, that frames could be made so stiff and square as to allow of their being ¼ of an inch longer than the old standard size, and that the ¼ inch (instead of ⅜) still left between the uprights of the frames and the front and rear walls of the hive, gave all the room needed for their proper manipulation. It never occurred to me that any one could possibly suppose that I meant that my frames could be *improved* in squareness or stiffness by making them only ¼th of an inch longer! I then thought that it was quite a desirable point to gain this ¼th inch, as in ten frames it gave an increase of comb surface enough for rearing over 1100 bees.

As such large operators as Heddon, Root, and Baldridge, insist that ⅜ of an inch space between uprights of frames and hive is the least that can be safely allowed; and as hives are not unfrequently made, even by good workmen, which vary a little from the true dimensions, and further, as some kinds of lumber are badly affected by variations in the weather, I am now of opinion that ⅜ is better then ¼th.

Considering the frequency and severity of my attacks of head troubles, which not only prevent me from taking any interest in bee matters, but which render any thought upon such subjects both painful and dangerous, it will not seem surprising that it is only within a few weeks that I have learned that the change in the size of the standard L. frame was made to carry with it *a change in the size* of the standard L. hive! I have no recollection of ever having read the article to which Mr. Baldridge thinks I ought to have responded, until I saw his reference to it in the *A. B. J.* of August 8th, or I should before this not only have corrected his misunderstanding of the reason I gave for preferring that extra ¼ inch, but should have expressed my deep regret that the *size* of the standard L. *hive* had been changed; not that slight changes in frame and hive are of any special importance, except as they interfere to any extent with the cardinal principle, that any L. frame ought to fit in every L. hive. Even after I ceased to use the double glass walls, the fractional ⅛ was retained to prevent confusion by departing even to so small an extent from the size then so widely disseminated. It is, however, very easy to exaggerate the inconveniences which have resulted from these slight variations. One will contend that the standard L. frame can not be used in the Root and Newman L. hive, and many will actually prefer that size of hive for them, as giving more room for the safe and rapid handling of frames. If both hives and frames are *very carefully* made, *I* find no trouble in using the R. and N. frame in the standard L. hive. The great length of the top-bar of the L. frame enables me, after removing one frame from the hive, to take out the others with great ease, thus: When frame (1) is lifted out, the end (C) of frame (2) is *drawn* toward the operator, without any lifting, until the angle is large enough to remove it without danger of hitting the sides of the hive; so in replacing it the end (2) is first put on the rabbet, and (C) can then be moved readily to its place. The long leverage of the L. frames greatly favors such manipulations. I would say here, that a variation of only ⅛ from front to rear, if it is on the side of making the hive *smaller* (say only 18 inches), is, for divers reasons, a much more serious matter than the extra ¼ inch; for in such hives it is well nigh impossible to have any free manipulation of the longer frames. I am using in my own apiary the Root size of frame in the standard L. hive, and find no trouble at all in doing so. I would even prefer, with hives and frames made as accurately as they should be, ¼ inch space, manipulating in the manner above described, to ½ inch, if the frames had to be squarely lifted out.



The conclusion of the whole matter seems to me to be this: The standard L. hive is 18⅛ inches from front to rear, and ten inches deep, all in the clear, and the standard L. frame is 17⅜, and not 17⅝; and I advise all who make new hives, if they can do so without too much loss, not to vary at all from these measurements. I certainly have no right to demand that the parties who are using the extra ¼ inch, both for hive and frame, should return to the old standard; but I hope that, instead of calling their hives the standard L. hives, they will call them the Root L. hives, as Mr. Root first used the extra ¼ inch. I presume that Messrs. Root and Newman, and other hive-makers, if not willing to return to the standard L., will have no objections to filling orders for Simplicity, chaff, or other styles of hives of the L. standard size.

Intending in another article to give in detail my reasons for adopting my standard size of frame, I will close by saying that I no more claim perfection for it now than I did in 1853, when in the full gush of enthusiasm over an invention which I hoped would revolutionize practical bee-keeping.

L. L. LANGSTROTH.

Oxford, Ohio, August, 1883.

Many thanks, friend L., for the valuable facts you give us in the above. I suppose our friends will, of course, give us credit for having good sense enough in this matter to avoid being tenacious of any peculiar views and opinions we may have in regard to the size of hives and frames. So far as I am concerned, I would just as soon the frame should be 17⅜ as 17⅝ with the exception of this matter of having the standard frame contain 8 one-pound boxes. Aside from that, I know of no objections to a change, except the number of hives and frames already in use, made to pretty exact measurements. In 1873 it seemed to me too bad that we should have such a sea of differences in sizes of frames and hives, with no two alike. And in order to try to start a system of regular sizes, I made the five illustrations which you all doubtless remember have been in our price list all these years. Before deciding on the size of a Langstroth frame, I sent to you, friend L., for a sample frame while you were in Washington. It came by express, and I used it as my standard—or at least I supposed I did. I do not know why I did not consult your book at this time; in fact, I did not think how much depended upon it. But we fixed our machinery then, and went to work. We have worked this one size ever since, and have also made Simplicity hives that would pile up and fit one another. We have also, during these years, sent out about 40 editions of our price list, averaging, at a very low calculation, 20,000 copies to each edition, making about 800,000, and these have gone to every part of the world where civilization extends. These Simplicity hives and frames are made and used in the Sandwich Islands, New Zealand, Australia, Europe, Asia, and Africa, and to some extent in South America. One more fact: During all this time we have been making these hives and frames, we have also made odd sizes to order; yet I can not now call to mind a single order for L. frames made 17⅜ inches long, outside dimensions. Yet we have had orders for the L. frames for a great variety of different dimensions. Perhaps I am a little vehement in this matter, but I am sure I seek only the public good; and if there is any great good reason why we should commence making frames and hives differently, I should think better of the idea of so doing. Our hives are generally termed Simplicity hives, and the frames which are generally used, of course in both Simplicity and chaff hives, are usually termed Simplicity frames. I do not know of any reason why we should not adopt the term Simplicity instead of Langstroth.

One more point occurs to me. I first suggested and put in practice the idea of having rigid iron frames to gauge the hives, that all manufacturers might work to one gauge. These iron frames have been sold for several years past, and shipped to manufacturers all over the world. These manufacturers are making hives to these gauges. I do not know how many we have sent out, but probably more than a thousand. Now, my good friend L., in view of all this, is it wise to advise even beginners to take up something different? I should be very glad indeed to know how many hives there are in use with a dimension from front to rear of 18⅛ inches. Can some of the friends tell us something about it?

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HOW FAR WILL A SWARM OF BEES FLY?

A SURE CASE OF A STRETCH OF 80 MILES.

I FIND the following items regarding the distance a swarm of bees will travel in search of a home, recorded in my diary of 1880, made at the time. The 19th of July I encamped under some pinon-trees at the base of the Spanish Peaks, 85 miles southwest from Denver City, Colorado. Twenty-five minutes past 12 o'clock I discovered a swarm of Italians clustering on the trunk of one of the trees near the ground, coming from the direction of Denver. They were flying slowly, evidently fatigued; securing the exact direction from whence they came, I mounted my pony, cantered over the plain in search of the ranch from whence they had escaped, expecting to find the parent stock in a couple of hours' ride at most. I kept up a steady march, with neither trees nor ranch in sight until 4 o'clock and 10 minutes, when I discovered some bees hovering around some giant cacti, from which 2 pieces of new comb depended, about as large as my hand. I readily perceived my colony had spent the previous night there. This was fully 30 miles from my starting-point. Going into camp there until the next morning I decided to keep on the same course until I found their starting-point. No more bees nor signs were reached until I came to J. C. Sines' ranch, within five miles of Denver. Mr. Sines told me that, the day before I discovered the runaways, at about 2 o'clock one of his colonies swarmed out, starting directly across the plain; after following them on horseback some 10 or 15 miles he had returned, never expecting to hear more from them. I am sure they could not have surveyed the country before starting on their long trip; and how much further they may have gone, I have no means of knowing. Hoping this may lead observers to approximate the distance an absconding colony may fly, I am yours respectfully,— **H. RANDALL.**

Prairie du Sac, Wis., Aug. 25, 1883.

It seems a little wonderful, friend R., that you succeeded so well in striking the direct line in which the bees came; but I believe it is a fact, that bees do sometimes get a sort of migratory mania, when they will fly a piece and cluster, build a little comb, as you describe, then "light out" and try it again, and so on until they may be the means of peopling very remote districts with bees.

Bee Entomology,

Or Enemies of Bees Among Insect Tribes

HONEY-DEW FROM SUGAR-CANE.

I CONCLUDED this morning to send you a piece of cane-top that has the insects on it, but don't know that they will live sufficiently for you to tell any thing about them. The tops infested with them are full of honey-dew. **J. D. FOOSHE.**

Coronaca, S. C., Aug. 1, 1883.

We mailed the specimen to Prof. Cook, who replied as follows:

The insects sent are a species of plant-louse, of the genus *Aphis*, as shown by the nectaries on the posterior end of the abdomen. (See Fig. 123, 8th Ed. of Manual). From these tubes come the exuding sweet. Our tulip-trees at the college are now all gummed up by the exudations of the tulip-tree plant-louse, which is green in color. The one on the cane is black. Insects of all kinds that crave sweets swarm about such plants, though bees do not keep them company till the fountains of the basswood nectar are dried up. **A. J. COOK.**

Lansing, Mich., Aug. 10, 1883.

My friends, here is another funny idea. We all know there is sugar in sugar-cane and corn. The problem has been to get it where the bees could use it. The aphides come in and offer to do the job "free gratis." The question now is, as to whether their reputation is such that we would want to let the job out to them at any price. I am a little doubtful in the matter.

SUCCESS WITH BEES.

A GOOD REPORT FROM THE AUTHOR OF "BLESSED BEES."

THE following, from the *Iowa City Republican*, is interesting to us, from the fact that it shows that the author of "Blessed Bees" has done something with bees besides write fiction. Since reading the book I have many a time felt anxious to know how far friend Clute had succeeded in making the pleasant fiction a reality.

Our townsman, Rev. O. Clute, has for several years made bee-keeping a recreation. Many gentlemen get relaxation and amusement with the horse, the gun, or the fishing-rod. Mr. Clute gets it among his bees. And in his case the pleasure brings profit also, for he makes bee-keeping a financial success.

A year ago he began the season with 110 stands of bees — 80 in his apiary, and 30 in charge of Mr. Ed. Younkin, on College Hill. The spring and early summer last year were most unfavorable for bees. The weather was cold, and the rain was excessive. But by daily feeding he kept his hives rearing large quantities of brood so that they were very strong in bees. After the middle of June the weather became favorable, and the white clover bloomed in great profusion. The constant rains of spring and early summer had saturated the ground so that the clover remained in bloom a long time. It yielded honey well, and the linn, or basswood, also yielded well. From these two sources an excellent harvest was secured.

In favorable seasons there is a good flow of honey here from fall flowers, including asters, goldenrod, figwort, boneset, sunflowers, Spanish-needle, heart's-ease, and some others. In this locality, heart's-ease is found in large quantities. Last fall it seemed especially abundant. The frost held off until late, so that the season was long. The clover, the linn, and the fall flowers combined gave a splendid honey yield. When the season was over, the crop from the 110 stands was found to be a little over 17,000 lbs., an average of 154 lbs. per stand, spring count. In addition to this yield of honey, the stock of bees was nearly doubled.

A part of this excellent success was due to the good management given by Mr. Ed. Younkin to the thirty stands in his care. From these he obtained more than 6000 lbs. of honey — a little more than 200 lbs. per stand. He also doubled the stock of bees. Mr. Younkin had for his share one-half of the honey and one-half of the increase of bees, which gave him a very good return for his summer's work.

The winter and spring brought some losses in stock; still, Mr. Clute brought his bees through in fair shape. He bred his queens last year from an imported queen, obtained directly from Italy, and from a beautiful queen given him by his friend Dr. I. P. Wilson, of Burlington, one of the professors in the Dental School in our University. Being bred from such superior queens, his stock was very excellent, and this spring has been in large demand. He has sold to different parties in Iowa and other States, 138 colonies, which have brought him in cash, $1132.

In sending out this large number, not a single accident has happened. The bees have been so well put up that every swarm has gone safely to its destination, with no complaints from express companies on account of inferior packing.

Mr. Clute begins the season with about 70 stands in good condition, which will be managed for surplus honey, and about 30 stands in not so good condition, which will be used for growing queens and increasing stock. The season thus far this spring has been about as unfavorable for bee-keepers as was last year. Cold weather and rains have kept every thing back. But the white clover now promises a most abundant bloom; and should the weather for the next two months be good, the harvest from this and from linn will probably be large.

Mr. Clute manages his apiary mainly for extracted honey, which he thinks is more profitable in this locality than comb honey. Not nearly so many pounds of comb honey can be obtained per hive, and it is more difficult to store it after taken from the hives, to prepare it for market, and to send it to market in good condition. The extracted honey is simply thrown out of the combs, run from the extractor directly into nice kegs or barrels, bunged up, rolled into the store-room, and gives no further trouble. When time for marketing comes it can be weighed, loaded on a dray, sent to the railroad station, and go thence around the world with no loss from broken combs and mussed honey.

Within a few years the production of extracted honey, and the demand for it, have assumed large proportions. It can never supersede comb honey, for the latter has excellence and beauty which will always be in demand. But the demand for extracted honey will in a few years be immensely greater than it is now. People are learning that it is a delicious, healthful, and cheap article of food, and are beginning to use in place of the inferior and unhealthful syrups with which the market has of late years been flooded.

It will be well for more of our intelligent men and and women to turn their attention to bee-keeping as a regular business. It is healthful, independent work, and on an average gives fair profits. It requires intelligence to learn it, and skill and delicacy in manipulation. Our young friend Ed. Younkin spent three months with Mr. Clute in the summer of '81. Last summer he took care of 30 stands of bees with the success we have mentioned above. This spring he has gone to Davenport, on recommendation of Mr. Clute, to manage 100 stands for Mr. George B. Engle, Jr., who gives him his board for the summer, and one-half the honey and one-half the increase of bees. If the season is favorable he will have a profitable year — more profitable than most clerks and young professional men.

Mr. Clute has been solicited to open a school of bee-keeping at his apiary, and give to a class of students a thorough course of instruction in the theory and practice of this fascinating pursuit. At one time he thought of having such a school this summer; but his health has been so impaired by several years' close application to his professional duties that he finds it best not to attempt at present this delightful work.

A few years ago, under the pseudonym of "John Allen," through the house of G. P. Putnam's Sons, New York, Mr. Clute published a romance of bee-keeping, entitled, "The Blessed Bees." It has had a most cordial reception from the literary and bee-keeping public, and is having a steady sale from year to year.

The friends who have read "Blessed Bees" will remember that the strongest point in the little romance, perhaps, was that our hero had every thing so well arranged that failure was almost impossible. In the above report, where he speaks of shipping bees without accident, I was reminded of this especial point. Were we to visit friend Clute's apiary, I presume we should find that he is a remarkable workman and a nice manipulator. I feel, after reading the above, as if I should like to go and get "Blessed Bees" and read it over again.

MRS. COTTON, AND THE GOODS SHE OFFERS FOR SALE.

CAN WE RECOMMEND HER AMONG THE REST OF OUR SUPPLY DEALERS?

PLEASE inform me if you have ever seen or heard of the party, Lizzie E. Cotton, W. Gorham, Me., and also what you think of her hive. I do not like the spirit she manifests.

Boston, Mass., Aug. 17, 1883. W. A. RICHARDS.

Yes, friend R., we have heard a very great deal in regard to Mrs. Cotton. If you will look over our back volumes you will be very well satisfied of the fact. I do not know how to answer you much better than to give the following, which came only a short time before your letter:

Friend Root—

Last spring I sent to Mrs. Cotton for a hive of her Italian bees. They arrived in deplorable condition, most of them dead, and no queen to be found. She lately sent me a new queen — the smallest specimen I have ever seen, and *that* she considers making things satisfactory. I consider her a humbug and a fraud. J. EDWIN KEENE.

Newark, N. J., Aug. 6, 1883.

The above letter is a fair specimen of the reports we get from her customers. I believe there are some, however, who are pleased with her goods, or at least she claims there are. If you will compare her circular with the circulars of other dealers, you will find her prices enormously high. That does not quite express it either, for she charges *four dollars* for a very small bee-book, and drawings and illustrations for making the Controllable hive. This bee-book embodies nothing not already well known; furthermore, it entirely ignores a great many of the modern improvements in bee culture. If I am correct, she gives the honey-extractor not even a passing notice! The Controllable hive, so highly recommended, contains no principle not already well known to all intelligent apiarists. Now if you still conclude to patronize her, we have nothing at all to say. So many inquiries keep coming up in regard to the many circulars she is sending out, that I do not know but that I shall have to keep a standing reply, embracing the substance of the above. The prices she charges for the things she has for sale would of itself forbid her being classed with the regular supply dealers who are now to be found in almost every locality.

QUEEN-REARING; SOME NEW FEATURES.

QUEEN-REARING AND DRONE-REARING.

I BELIEVE it is said that Mr. Alley, in his book on queen-rearing, claims that, if there are no black bees within half a mile of our queen nursery, our queens will be almost sure to become purely mated. Although this is altogether contrary to the general theory upon the subject, yet two years ago, in raising queens, there were black bees within one mile of me at two different places, and at the same time I found my queens were all purely mated, though I raised only about a dozen that year, and of course could not consider this a thorough test. Since that time I have been requeening the black bees near me. But the new features above alluded to are, first,

HAVE YOUR DRONES ¼ MILE FROM YOUR QUEEN NURSERY,

and, what is better, at two or three different points; and to accomplish this is an easy matter, which brings us to our second new feature; viz., to

CLIP SOME VIRGIN QUEENS' WINGS, AND MAKE DRONE-LAYERS OF THEM,

and in this way we can easily have any kind of drones we choose. It would be well to have at least four colonies with this kind of queen, the colonies to be stationed at four different points ¼ mile distant from our nursery. Of course, we shall have to keep these stocks replenished with workers by giving them worker brood. One who has never tried this would be surprised to find the number of drones that could be kept in one hive. CHAS. KINGSLEY.

Greeneville, Tenn., Aug. 15, 1883.

Very good, friend K.; but have you ever done this? I should suppose from your remarks that you have, although you do not say so directly. The next thing is, are these drones as large and vigorous as drones reared in the natural way? The idea has been many times suggested; but there is a little controversy in regard to these drones. Your suggestion in regard to having drone-rearing colonies a quarter a mile from the apiary in four different directions is, I think, a good one.

DOOLITTLE'S LETTER.

UNSEALED BROOD TO KEEP FIRST SWARMS FROM LEAVING.

WITHOUT desiring any controversy, and with no spirit of contention, I wish to say a few words more regarding giving first, or prime swarms, unsealed brood to keep them from decamping, as it may be of benefit to all. Friend Root and others recommend doing so, while all of my experience goes to prove that it is bad policy. Friend E. T. Flanagan writes me under date of Aug. 3, "I have read yours in last GLEANINGS, in regard to putting a frame of brood in hives to make swarms stay, and I am satisfied that you are *mistaken*. I have had some experience in this thing in the last few years; and in nine cases out of ten, if no brood was given, away would go the swarm; while with a frame of unsealed brood (*not hatching brood, or capped brood*), they would stay 49 times out of 50. I doubt seriously if you ever tried it sufficiently to prove its efficacy. It's all bosh about their being tired of brood, and wanting to get away from it. Then why do they go right to raising more again? I should like to know. I hate to see two such good teachers in apiculture give the novices such contrary advice. It bothers them, and shakes their confidence in the reliability of their teachers."

On page 451, friend Root tells us how he purchases bees of the farmers, and divides them up into from 1 to 10 lb. lots; and when given unsealed brood they generally stay; otherwise they often leave; but he will readily see that this is not trying the efficacy of it as Maggie tried it, or as I would do in my own yard. In his case I should most assuredly give brood; while in Maggie's case I should *most assuredly not* do so.

Right here I wish to ask all who favor the plan of giving brood to prime swarms, to tell the reason, if they can, why Maggie's swarms both stayed and commenced to build comb before the brood was given, and why they both went out and left after the brood was given, if it was not that brood which changed their motives. It will be observed, by turning to page 396, that all went well with Maggie's bees till the brood was given.

Now, as regards confidence in teachers: What shall I say of the assertion friend Flanagan makes, that 9 swarms out of 10 will leave where no brood is given, when I have not had a swarm offer to leave, out of over 200 hived, for the past four years, under precisely the same conditions? Well, I had to laugh outright when I read it. Friend F. says it is all "bosh" about the bees wanting to get rid of the brood, as I quoted from friend Betsinger. Well, let us see: I think I tried 16 swarms with the brood, (was that a sufficient number?) and out of the 16, eleven tried to leave, and the first succeeded, making 12 out of the 16. In all these cases I found queen-cups built on this frame of *unsealed* brood, and eggs laid therein, just as is often done when the bees swarm from the parent hive in a hurry, which proves Mr. Betsinger's idea correct, that the bees considered themselves placed in the same condition they were before they swarmed, and so swarmed to get away from the brood. In all the cases, from a teacupful to a pint of bees stayed to care for these queen-cells and brood, which again proves that the swarm left under the same conditions in which they leave the parent hive. In answer to the question, Why do they go right to rearing brood again? I will say, that after the queen has had a little rest she goes to laying as new comb is built, and it is at least six days before the swarm gets brood in the state of that which is given them; and by this time the desire to swarm has been changed to a desire to keep their numbers good, and thus continue their existence as one colony; while up to this time brood only increased their desire to "multiply and replenish the earth." Localities differ much, and bees act differently in accordance therewith, hence no rule will apply to bees in all portions of the world. I but speak what I know to be true in this locality, and accord to all the same privilege.

Now I will stop right here, by requesting all who read this to try next season 10 first swarms, giving 5 a frame of unsealed brood upon being hived, and hiving 5 without brood, and see which is the more inclined to stay. By so doing we shall arrive, not at my conclusion, and not at friend Root's conclusion; but at a conclusion whice will be beneficial alike to all. G. M. DOOLITTLE.

Borodino, N. Y., Aug. 13, 1883.

Here is another friend who has something to say on the other side of the matter.

On page 376 is an article from Mr. Doolittle, in which he gives his experience with sheets of brood used in swarming-time. I am not going to dispute friend Doolittle's sincerity, for I think he speaks according to his experience; but it is not at all like mine. In an experience of seven years handling bees, I have had but one swarm leave me. That occurred in 1878; they came out, and they did not alight, but left for parts unknown. I was a little greener in the business than I am now, and knew nothing about putting a sheet of brood in, and I think I am indebted to GLEANINGS for that information in 1879; but I will not speak positively about that. Well, since I saw the article I have practiced it, and, as I think, with the most favorable results, for I have yet to have the first swarm leave a sheet of eggs and larvæ.

CLIPPING QUEENS.

Now, I do not clip queens' wings, for I think I have been rather unfortunate with three valuable queens, all of which I clipped (one we got from friend D. this spring), and the bees have invariably superseded them in a few weeks; but perhaps it was not owing to the clipping. Friend D.'s plan of managing (if he has his queens' wings clipped), will work all right with two or more swarms when they come out and go together; that is, if he is right at the entrance, and can pick the queen up and cage her. But we will suppose friend D. is up in the top of a tree trying to capture a swarm that has just alighted; is there not danger of one or more of the queens that have their wings clipped crawling away in the grass, or under some hive, and get lost? I should think the loss in this way would be fully as great as it would where the queens are allowed to fly with the swarm. I have this summer had as high as 8 swarms in the air at one time, and all went together; 5 of the queens I found, and three of them I did not find; but all were divided as nearly as I could, and given separate hives; but, mind you, there was the sheet of eggs and larvæ in every hive, and in 4 days I was able to tell which had a queen and which not. Now, for me I would almost as soon think of not hiving a swarm at all, as to think of hiving them without the sheet of brood.

I am not prepared to believe Mr. Betsinger's theory (though it be indorsed by friend D.); i. e., that putting in the sheet of brood is the cause of their absconding. No, no, friend D., don't let's believe all that, but take another view of the matter. "Bees swarm to get away from their brood." What, when we have so many evidences that they are so fondly attached to their brood that you may take a young sheet of larvæ with the adhering bees from the parent hive, and put it where you choose, and enough young bees will stay with it to care for and nurse their young sisters? Now, this is not an evidence, in my mind, that they want to get away from it. I think it is clear, to my understanding of the matter, that when bees swarm, the principal reason is, that their hive is too small to hold the rapidly increasing numbers, and the queen is either compelled to stop laying, or hunt new and more commodious quarters. How is it when you divide a colony? You take the old queen and one-half the brood to a new stand; it is not usual, I think, for the bees to desert the brood, queen, and all, and go off. Any one who has doubts about the quieting and consoling influence of a sheet of young brood upon a colony, let him hive a second swarm with a young queen on a hive full of foundation, and, as you will many times see them do, run out and in the hive, over the front, and show great signs of dissatisfaction; give them a sheet of young larvæ, and note the instantaneous change. They are contented and quiet at once. When I see a swarm coming out, I no more think they are going to the woods than I think the sun will not go down behind the western horizon that evening; and after they are hived I have no more thoughts of their leaving the hive than I had of their going off.

I have had, this summer, several cases where the queen was lost in swarming, and the bees, after they were hived, would, a portion of them, go back to the old hive; but in no case did they desert the brood so but that there would be a good strong nucleus left, and those nuclei now are good strong colonies. A. W. OSBURN.

Water Valley, N. Y.

And here is still another letter in regard to the same matter, and this time it is from a lady; and she gives us some very valuable suggestions besides:

A CHAPTER ON ABSCONDING SWARMS.

Having had quite a large experience with new swarms absconding, or endeavoring to do so, I will give you a few items in regard to it, which I think will be of interest to many bee-keepers who are losers in this way. For two or three years after we began to keep bees we had no trouble from this cause, and wondered why so many of our neighbors' bees left and went to the woods. We thought it must be some mismanagement of theirs; but in the summer of 1881 we began to have some experience of our own. We always allow natural swarming, and do not clip the queens' wings, because so many would get lost in our grassy apiary; and besides, we don't quite like the plan. Up to this time we had not placed unsealed brood in the new hives. But one morning a large first swarm issued. We hived them as usual by shaking them down in front of the hive and letting them run in; then we carried them into the apiary, placed a board shade over them, shoved the hive out beyond the bottom-board, to give plenty of ventilation, and supposed they would stay, as all other swarms hived in the same way had done. The day was very warm; the thermometer rose to 100° in the shade. About one o'clock we saw them leaving their hive; and with a mirror and a pail of water we endeavored to make them cluster; but our efforts had no effect upon them, and they were lost. Then we resolved that henceforth brood should be placed in all the new swarms. For the next few days several swarms were hived, which made no attempt to leave, and we began to think that brood was a sure cure. But another very warm day came, and with it another large swarm, which was given brood. They stayed quietly three or four hours, and then were seen coming out. We pelted them as much as possible with dry dirt and water, but they kept steadily on their way, and we had to say good-by. Soon after, another swarm departed in the same way. We were now fully convinced that brood did *not always* keep bees. These three were lost out of the 30 new swarms of the season.

In 1882 we lost three in the same way—two with and one without brood. Four others attempted to leave, but I succeeded in confusing them enough so they clustered, and were rehived. They were stopped in the following manner: Having become somewhat provoked at losing so many bees, I said I would drown the next swarm before I would let them go off. So the next swarm I saw coming out, with a pail of water and a whisk - broom I ran to the hive, sat down before the entrance, and deluged them with water as fast as they came out. This bothered them so much that they clustered (but I did not drown any of them, for a bee can live through a great deal of drenching); all the other swarms had started straight for the woods. After this I treated all absconding swarms to a cool bath as they were leaving the hive. I always succeeded in making them cluster but once, and they swarmed out the second time, and were more than half out before we saw them. So four were lost out of the 50 hived, and four others would have been, had nothing been done to stop them.

During the past season, all the swarms (30 in number) hived before the 26th of June, made no attempts at leaving. They were hived without brood, in empty hives, for we had tested the plan pretty thoroughly, and could not see that the swarms were any more inclined to stay when we gave them unsealed brood than when they were without it. But at this time the weather became very warm, being over 90° in the shade, and continued so for three days, in which time we had 13 swarms, and 8 of these were determined to leave; but only one succeeded in doing so, and that was because they had a clipped queen that we found, too late, could fly. Most of these swarms came out three and four times. Each time they were hived they would stay quietly for four or five hours, and then come out again. When they were hived quite late in the afternoon they would remain over night, and come out about nine o'clock the next morning. I have not a doubt but that each one of these swarms would have gone directly to the woods had nothing been done to prevent it.

In the February number of GLEANINGS, page 90, N. N. Shepard states that when he sees new swarms deserting their hives he at once closes the hive, letting it remain so for about a minute, then opens it, allows about a quart of bees to escape, and again closes it, continuing in this way until the bees are all out. This confuses them so much that they will always cluster. We had always been afraid to close the hive for fear the bees would smother; but when we saw that it had been tried with success, we resolved to try the plan at the first opportunity; and having had plenty of opportunities during one week we have tested the plan quite thoroughly, and consider it a sure preventive of the bees going to the woods without clustering. Our bees would not come back to the hive, but some would try to unite with some new swarm near by, and others would cluster. If we could secure their queen, her wing was clipped (although that would not prevent their swarming out again)and we knew they couldn't leave. We usually sprinkle the bees with water as they come out of the hive, in order to check the rush a little, so that we may catch the queen when she comes out, which will be when the swarm has about half issued. These eight swarms we hived and rehived about twenty times, so you may know that business was lively for that week. Since then we have hived a good many swarms, but have had no trouble with them.

Now, all these swarms were well ventilated, the hive shaded with trees, or else with wide board shades; at no time of the day was the sun allowed to shine on them. The hives were large; had been made and painted in the winter, and we could see no reason for the bees disliking them. We always hive our swarms as soon as possible after they are clustered, and then move them away quite a distance. We have tried hiving with brood, and without it, about equally, and are of the opinion that it makes no difference with this kind of absconding. But we think that it is the *intense heat* that causes their dissatisfaction, for we have never had a swarm try to leave when it was not above 90° in the shade. If any one else has, we should like to have him report. All of the 18 cases mentioned above were large first swarms, four of them double. We do not allow second swarming. If all these swarms had succeeded in going to the woods, our losses in this way would have been greater than in all other ways combined. We are rather inclined to think that these swarms look up a location after they are hived, but we have no way of proving it. Do bee-keepers in the North have less trouble from this cause than those in the warmer climate of the South? Can any thing be done to lower the temperature of the hives during these warm days? Any information in regard to this matter will be read by us with interest.

Brookfield, Mo. ANNA STANCLIFT.

I think, after reading the above, we shall have to conclude that friend Doolittle knows pretty well what he is about, after all. And one point seems to come out quite clearly; viz., that strong first swarms, especially during severe hot weather, are rather an exception to the rule, if there be one, that bees are loth to desert unsealed brood. Now, my plan of fixing these heavy colonies so they can not get away would be to break them up so small that they would not feel the effects of the extreme heat, and that they might get over this feverish spell that seems to accompany this swarming mania. I tell you, friends, they would not get away from us, and we would hold them with brood too. But we would break them all up in little pieces, you see, and then make them pay for their board and lodging by furnishing us with queens. I know this would not be very practicable for all of you, but it is the best I have to offer. I do not like queens with clipped wings either, any better than our friend who has just written. In regard to sprinkling them with water, the great obstacle, as I see it, would be in being right on hand while they were just pouring out of the hive. And, in fact, this is a great obstacle in the way of making any of the plans practicable. How about decoy hives, of which we have heard so much lately? Can we not fix some sort of a decoy hive so tempting that, when they run off, they will run somewhere on our own premises?

MORE ABOUT FLORIDA.

BEES AND ORANGES.

YOUR agreeable and instructive GLEANINGS is reaching me regularly down here in my Florida home. It is hard to tell how much I enjoy it, and what a pleasure it is to become acquainted through their writings, with your "big" bee-men, and especially with yourself, although *you* will now and then make an "unkind" remark about our adopted State. I don't mind that, though, for I think you are a Methodist; and a State that is dotted about with pretty lakes that comprise about one-fourth of its surface is not the place for you, for you would soon be a Baptist. You are afraid we will get lazy; but I can assure you that we have no time to get lazy, and there are less lazy people and loafers here than any place I ever saw. We work right out in the sun, summer and winter, without any injury, and do more hours' work in a year than you all do. Our bees do not get lazy either, when their master is not lazy, for they will get honey when there is any to be had, and store it bountifully.

I commenced with six hives in the spring, and increased to 13 by natural and artificial swarming, after losing some swarms that took to the woods. One swarm came out on Sunday, while I was away, and I found them the next morning, and hived them. In two hours they all rushed out and made for the swamp. Thereafter, as soon as I got a swarm in a hive, I moved it to its permanent place before any runners could return from the woods. Since then I notice some of your writers recommend the same thing.

I introduced my first Italian queens last week. One was a complete success; the other as complete a failure. They balled around the queen, and I caged her a few hours longer. I then let her walk out. She seemed afraid of the bees, and passed down the frame; and when they tried to make her acquaintance she cried "zeep, zeep," two or three times, and ran around the end of the frame, and I never found her afterward, and I examined them every few minutes for two hours.

Our bees commence to store honey in Jan. and Feb. from the orange and yellow jessamine, etc. They work rapidly then for about two months, when there is a cessation for two months, during which they gather enough for themselves. In June and July they store a good quantity of honey again. Sometimes it lasts till September. There is hardly any time in the year, close to these swamps, that they are compelled to use up their supplies.

We are troubled some in the spring with mosquito-hawks catching the bees late in the evening. As their damage is done near sunset, I do not think that they catch any queens. The watchword is, "Kill them." The more hives the less damage. They last about six weeks.

The moth does not trouble in the L. hives where they are attended to. I am making the plain L. hive, and using frames of my own make. I wish your factory were closer. However, it pays me better to send to you for frames and sections than to make them myself. I hired a Barnes foot-power saw last week, with the intention of buying it if I liked it. I put it in good working shape, and commenced. I soon found that I could make frames 4 times as fast by plowing for my neighbors at $3.00 a day, and sending to you for them. I could not afford to run it on our *Florida pine*, if it had been given to me. A bee-man in the next county drives his bees into a new hive when he wants honey, and makes them begin over again, and says by that way he keeps them free from the moth. He needs a bee journal.

SOUR HONEY.

I had a small lot of sour honey. It was taken from an L. glass-end box. I noticed that the bees were a long time capping it over, and I could see them standing around, running it out on their tongues, and fanning. I took it off before they capped it all, and the whole of it soured.

HYBRIDS.

One of my young queens left in the old hive after the swarm issued, met an Italian drone, and now all the busy workers are yellow-banded, and indefatigable workers. I have noticed a few yellow bees in some of the other hives. I hope to have them all Italianized in a year or two. My black bees are very gentle, seldom offering to molest me.

If I get three acres of orange-trees bearing, and 100 stands of bees to look after, do you think I shall have time to get "lazy" down here? At any rate, give me the orange-trees and bees.

Altamont, Fla., Aug. 4, 1883. S. P. SHEPHERD.

Friend S., you are quite mistaken if you think Florida would not be pleasant for me on account of your pretty lakes. I love lakes dearly; and furthermore, I love both Methodists and Baptists, and all other Christian people who are trying to serve God according to the dictates of their own conscience.—I am very glad indeed to know that I was mistaken, and that you Florida folks are not in the habit of getting lazy; and I am glad, too, that those mosquito-hawks come only at certain seasons of the year. Some of us were a little afraid that they were chasing the bees up all the time. If you can get $3.00 a day for plowing, and plowing is a business you understand (for I am well aware that a man may be expert in handling a team or a plow, as well as in handling a Barnes foot-power saw), no doubt you would do better to follow the plow, and let some one else make the hives. But I think that some one who knows just how to handle a Barnes saw would make it go nicely, even in your Florida pine.—In regard to the sour honey, if there are enough bees, and you give them time enough, they will sweeten it all out, if left in the hives. I see you have accepted friend Hasty's explanation as to the way in which bees ripen their honey.—No, I am sure you ought not to get lazy with 100 bee-hives and three acres of orange-trees.

THAT 90 MILES AN HOUR.

INASMUCH as friend Root has said that he now believes that bees do sometimes fly 90 miles per hour, it is my intention to re-claim what he has conceded, by showing that all the *facts* presented thus far tend to show that in no instance has it been shown that bees fly even 40 miles per hour.

FRIEND PHIN

takes me to task for arguing about things in which my knowledge may be incomplete, and proceeds in a very logical way to show that bees fly 90 miles per hour; while if he had compared the wing power of his pigeon with that of the hawk or eagle, — birds possessing great wing power, and adapted to carrying heavy burdens, but slow in flight, — it is easily seen that his deductions would have been against him. This being true, his argument possesses no special merit in this case.

FRIEND DOOLITTLE'S ARTICLE

appears to be mostly guesswork. So he will excuse me if I guess that, in observing that train, he would be like the person mentioned in the Scriptures, who, beholding himself in a glass, turning away, forgetting, etc.

I have hunted and found bees in Ohio, Iowa, Missouri, Kansas, and Illinois. I have followed them over hills and hollows, through timber, across fields and open prairie; and if friend Doolittle has any way of determining that bees actually fly faster when half a mile from the apiary than they do within 10 or 15 rods of it, I should be glad indeed to have him explain. I am aware that not a few bees about an apiary fly very slowly; but these are the old veterans in the cause, which have their wings ragged and worn from the many miles they have flown in their toil for the precious sweets, and their flight is just as slow in the fields as it is about the apiary. Those able-bodied fellows whose flight in the clear bright sunlight is like a flash, are just as difficult to get sight of at a distance of 100 yards from their hives as they are 100 rods away; and if friend D. doubts the correctness of this statement, I suggest that, for the sake of science, he try hunting bees a few days in some community where he is not familiar with all the surroundings.

VELOCITY OF WIND.

The best I can do at present concerning the velocity of wind is to give the following table, taken from a work on natural philosophy:

6 miles per hour,	Pleasant wind.
10 " " "	Brisk wind.
15 " " "	Very brisk wind.
20 " " "	High wind.
30 " " "	Very high wind.
40 " " "	A storm.
50 " " "	A hard storm.
60 " " "	A great storm.
80 " " "	A hurricane.
100 " " "	A violent hurricane.

I may be mistaken about a 90-mile wind taking friend D.'s hives out of his yard; but it does not follow that, because an 82-mile wind did not move his hives, a wind increased one-tenth that velocity would not carry them away. At least, I should not care to have the matter tested in my apiary.

OUR RAILROAD FRIEND.

The only data given so far, from which any definite conclusions can be arrived at, is that from our railroad friend. But I am sorry that he should have given us the details of his experiments, and at the same time summed up his conclusions just the reverse of what his experiments teach.

Our friend evidently liberated his first bee inside the car, or he would have had no occasion to darken the car windows. The car being closed, the bee would fly from rear to front of the car just as easily as it would if the car were standing still, because the atmosphere, which is the medium of flight, is carried with the car. He says the bees reached the window in "10 or 15 seconds," a distance of about 25 feet, I suppose, the car being some 28 or 30 feet in length. As those bees circled about in the car, just as any other bees would do in a strange place, it is no more than fair to say that they traveled about 100 feet before they reached the car window; 100 feet in 10 seconds is 10 feet per second, or a little less than 7 miles per hour; while a velocity of 90 miles per hour is 132 feet per second — a velocity so great that I am prone think that an object so small as a bee could not be seen.

Now let us look at the bees liberated outside of the car. Every one who knows what a train of cars is, knows that a passing train disturbs the air about it just in proportion to its speed; and although it is easily observed that the air is disturbed much less above than at the sides of the train, I think that no one will deny the fact that it is disturbed several feet above it. This disturbance must of necessity result in carrying the air in the direction of the passing train, so that at 6 or 8 feet above the train the air is moving in the same direction at least ⅛ or 1-10 the speed of the train; so it is evident that a bee, by keeping inside of this circle of disturbed atmosphere, can keep up with a train without flying as fast as the train is running.

Who is it, of apiarists, that does not know that a bee, when liberated in a strange place, moves about very slowly, and circles around very closely to the spot where it first takes wing? These two facts of themselves are conclusive evidence that my position concerning the motion of the atmosphere about a moving train is correct. This being true, it is easily seen that a bee liberated from a train running 45 miles per hour could, by keeping close to the train, keep up with it by flying only ⅔ or ¾ as fast as the train was running, because the atmosphere carries it along at the rate of ⅓ or ¼ the velocity of the train.

It is evident, that bees can not fly fast when flying in small circles; yet it seems our friends have all overlooked this point in their argument.

I mentioned before, that bees can not face a very strong wind. If a bee can not make any headway against a wind blowing 20 or 25 miles per hour, how can it be argued that a bee can fly 90 miles per hour, when at a velocity of 20 or 25 miles it would meet with the same atmospheric resistance in a still atmosphere?

Some of the friends may think to gain a point here by saying that, if the bee would go with the wind it would make 50 miles per hour. I admit that it would travel at the rate of 50 miles per hour; but I wish to ask, Does the bee fly that fast, or does the wind do a part of the work? There, have I not redeemed my promise, friend Root? S. A. SHUCK.

Bryant, Ill., Aug., 1883.

Friend S., I suppose I shall have to own up that I read that account of the railroad experiment at first, and took it for granted that the bees were flying outside of the car when they went from the front to the rear. I did not see my mistake until friend Doolittle's article was in print, and I have been a little ashamed of it ever since. I think I won't decide any more whether bees can fly 90 miles an hour or not, until I see how many facts are going to be brought out. At any rate, I feel like thanking you for the able manner in which you have handled the subject in this present article.

BEE-NOTES BY FRIEND WILLIAMS.

GETTING BEES TO FIX UP BROKEN COMB HONEY.
BEE-KEEPING IN CENTRAL ILLINOIS.

THERE are fifteen or twenty large bee-keepers in this county. I mean men who make it a business. Some thrifty farmers are into it, and say their bees make them more money than their farms. I keep only a few colonies, and have for my object fun and not profit.

CHAFF HIVES.

I am making chaff hives for future use — using chaff only around and under brood-chamber. In fact, they are about the hive Langstroth describes in GLEANINGS, except that the frames in super hang crosswise. I used for outside walls, wagon-box boards ($40.00 per 1000), and 3-in. wainscoting, ⅜ in. thick ($21.00 per 1000), inside walls. It works with no waste at all. I use the Langstroth frame exclusively, below, above, summer, winter, yesterday, to-day, and to-morrow.

CYPRIANS.

Well, I should think they are prolific. If one wants a "start," they have only to get a queen and two or three bees, and set them up, and then run for life. Can not friend Gray invent special machinery for making steel coats, or armor, to be used when we open a colony of these Cyprians? Several of our best apiarians here prefer them to Italians. If I have been up and lost sleep, and feel sluggish and drowsy, I go out and open the Cyprians, and I am wide awake in three seconds.

SMOKERS.

What would you think of a "large and influential" bee-man who never had nor wants a smoker? I am trying to get him to chew tobacco, and then get him to quit, so you can *give* him a smoker.

INDUCING BEES TO FINISH UNSEALED COMBS AFTER BASSWOOD AND CLOVER.

I had a dozen or more frames, about half of which were filled half way down, but uncapped. These I took and cut the empty comb off, sawed off the lower half of the end-bars of the frames, tacked on bottom-bars, which gave half the depth of L. frames, and full of comb, unsealed. I filled a half-story full of them and put it over a strong colony. They could build no comb then for want of room. I hoped to see them seal this white honey. Failure. I took the other frames that were full of comb and honey, and only partially capped, and put them all in one super, and placed it over a strong colony. Failure. I then took them from the bees a week, left their super frameless and empty, talked discouragingly under their eaves of nights, and sung doleful songs about famine and idleness, then gave them the combs back. Failure. I next, with considerable trouble, hung the frames bottom side up, bringing the unsealed margins above. Failure. I am in fine spirits yet, but the frames have been carried around until they are about all worn out, and the honey too. They both look now as if they had come through the Revolutionary War, and my wife says she would not eat it, if I *was* to get it sealed in this century. Bees are at work now on Simpson plant and corn-tassels; can't you give us a picture of goldenrod in GLEANINGS, so we can see if we all mean the same plant. A. C. WILLIAMS, M. D.

Hugo, Ill., Aug. 16, 1883.

Friend W., if you manage to make your bees pay, and have fun with them too, you certainly ought to be satisfied. It is not every one in this world who can make this happy combination in his daily avocation.—In regard to that tobacco matter, if you go to trying to get people to chew, we will have you advertised in the papers — see if we don't.—No wonder you had a failure in trying to get them to finish up comb honey. I once cut out little squares, and then put them into the hives to induce the bees to clean up the drip and seal it all over, so as to have 10-cent cakes of honey in the comb. My experience was about like yours. By feeding until you had the brood-nest crammed and bulged, you would have succeeded, I think.—Goldenrod is already pictured in the A B C book; but there are so many varieties you would hardly know it with a great many pictures, unless you went into botany a little. A dozen different goldenrods may often be found by a single roadside; and, if I am correct, there are some forty or fifty varieties from which the bees get honey.

THE BEE-KEEPER'S SABBATH.

BY REV. W. D. RALSTON.

NOTICING something on this subject in GLEANINGS, I will give my experience. As I am the pastor of a church, of course I could not remain at home, and I would not wish any of my family to absent themselves from church and Sabbath-school to look after my bees. This summer I had a man, hired for two months in the busy season, to help in the apiary. It was his custom to go home on Saturday evening and return Monday morning; and although he offered to remain in swarming-time, and watch my bees while I went to church, I declined his offer, feeling that my conscience would not permit me to hire a man to stay away from church to watch my bees. If any swarms came off before I went to church I hived them; if any were hanging on the trees when I returned, I hived them also; but if any came off while I was away, which was from 10 A.M. until 1.30 P.M., and got tired of hanging in the cluster, they were at liberty to go to the woods. I can also say, that the thought of a few swarms leaving for the woods has never troubled me in the least. Along the edge of the timber, and here and there through it, are poor men living. Some of them are quite expert as bee-hunters. As the timber is not very extensive, few colonies go there but are hunted up by these persons before winter, and the honey thus obtained is an addition to their bill of fare much relished by their children. If a few of my bees have thus stolen away on Sabbath while I and my family were at church, and helped to increase their fall supply of honey, I am satisfied; and more so when I read such a passage as Lev. 19 : 9, 10: "And when ye reap the harvest of your land, thou shalt not wholly reap the corners of thy field, neither shalt thou gather the gleanings of thy harvest. And thou shalt not glean thy vineyard; thou shalt leave them for the poor, and the stranger; I am the Lord thy God."

Six years ago I purchased 19 colonies of bees. I now have 80; I raise both box and extracted honey, and depend for increase on natural swarming. By giving plenty of room and ventilation, and by carefully shading my hives from the sun, I have labored to keep down swarming. All these years I have gone to church and left my bees, and I never heard of a swarm leaving while I was away, and I never had any grounds to think that any did leave.

Scotch Grove, Ia., Aug. 22, 1883.

Thank you, friend R., for your wise counsel. I am pleased to note how nearly you decide just as I had done before your article was received, on page 538.

RAILROAD FARES TO THE CONVENTION, ETC.

SOMETHING FROM D. A. JONES.

ANNOUNCE return tickets at single fares on all railroads in Canada from the 17th to the 22d of Sept.; 1⅓ fares for excursion tickets from the 10th to the 22d of Sept. I am arranging hotel accommodations. Urge every one who possibly can get here, to come. There will be special excursions from many points in the U. S. very cheap, to the Falls and Toronto. I hear of one from Kentucky, Cincinnati, Pennsylvania, New York, Chicago, etc., but can not get particulars yet. They are to be advertised thoroughly by the excursion agents of each road. Parties communicating with them can get full particulars. We will do all we can.

And, friend Root, you say the can business is lively now with you, and that you receive many orders every day. Why, after your people visit our exhibit in Toronto, your trade will doubtless double for some time. We have been receiving orders for from 500 to 3000 daily; but last Wednesday, orders arrived for nearly *ten thousand!* We expect to have the first hundred thousand completed next week, and yet are behind on orders.

I should have sent you samples of our new tins sooner, but was improving on them, so now we consider them perfect. When you start making them you can turn your whole shop into an immense tin-factory. I will have you some honey-can labels ready to take back from our convention; and if I do not surprise you all with their beauty and value, I shall be disappointed.

Excuse haste and scribbling, as you know how it is to be nearly driven to death with work. Looking forward to the time when I shall have the pleasure of again talking to you personally, I am, dear sir,

Yours in haste, — D. A. Jones.

Toronto, Can., Aug., 1883.

Thank you, friend Jones, for your suggestions. We shall be very glad indeed to see the new honey-pails, labels, and all the other things you are continually inventing and devising to make the bee-men happy. Long may you "wave"! By the way, we do not find Cleveland in your enumeration. Are there not friends enough going from Cleveland so as to get tickets at a reduced price? Who is there among us who can agitate the matter, and get us a rate that can be reported in our Sept. Juvenile? We will try to have it out a little earlier next time.

By the way, friend Jones, if you don't already know it, I have another piece of good news for all who go to the convention. Mr. Langstroth is to be present, and has promised to go with me; and I hereby invite friend Muth to go to his home and get him, and bring him to our place, and then we can all make the trip to Toronto together. If any other bee-friends want to be among the number, let them come along.

WINTER PREPARATION.

BY J. E. POND, JR.

ONE of the reasons for severe losses in winter, I firmly believe, is that we wait too long before we commence winter preparation. In our anxiety to obtain the largest possible yield of surplus, we draw from the brood-chamber with the extractor, up to the very last moment, or leave the sections on till it is almost too late to feed up for winter with safety. By these means we either exhaust the brood-chamber entirely of stores, or allow the bees to put both honey and pollen where they choose, which, as a rule, is in such parts of the frames as will be nearly inaccessible to them in late winter or early spring, at just the time when they are most in need of them. I once thought the form of frame was the chief cause of loss in winter; but I am now convinced that such is not altogether the case; and while I favor the standard L. form, believing it to approach the nearest of any to the shape indicated by an observance of natural laws, I am still of the opinion that deeper frames would winter more successfully, if care were taken in their preparation for the approaching cold season, at an earlier period than is usually done.

What, in my own view, is needed to enable a stock to winter safely, is a frame that contains a sufficient amount of stores, so placed that they are at all times accessable, no matter how cold the season, or in what condition it is placed. I am speaking now of wintering on summer stands; having had no experience in any other form of wintering, I am unable to give any but a theoretical view upon aught else. An experience, however, of sixteen years wintering on summer stands, using the standard L. frame without loss, may warrant me, perhaps, in thinking my ideas are nearly correct upon the matter, and may, perhaps, be considered tolerably safe for others to follow.

My apiary is protected on the north and west sides by a high close hedge. The hives face the south, and have no other protection. I have used double-walled and chaff hives, and also single-walled Simplicity hives, made of ¾-in. pine stock, and with the alike good results given above. I have lost colonies in winter during the above-mentioned period, but never one in the L. hive. I commence preparations early in the season — as soon as the first of August, sure, when the yield from white clover has ceased. I consider seven standard L. frames sufficient to winter any colony upon, and use chaff or dead-air division-boards, made of very thin material, in each side of the hive. I want each of these seven frames (or a smaller number for a smaller stock) filled and capped throughout the whole upper two-thirds (or ½ at least) with pure honey, or such other stores as I design to use. This object can easily be accomplished by using the extractor; and if I could use it for no other purpose, I should consider it paid me well to own one.

I stimulate brood-rearing by feeding diluted honey or sugar syrup, up to the latest moment I can induce the queen to lay. By this means my stocks enter the cold season with a full force of young, strong, active, and vigorous workers that have stamina enough to withstand any changes, even of a climate as variable as Eastern Massachusetts. About the first of November I open my hives and force the clusters, by changing the position of the frames if necessary, to occupy one or the other side of the brood-chamber. I tip the hive at the back, by placing a piece of deal, two inches thick, under the rear end. After having placed the cluster where I wish it, I put on the frames a "Hill's device," or some substitute for it; but I consider *that* the simplest and cheapest device that can be used. I then cover the bees closely into the brood-chamber with a mat made of burlap, or light cotton duck (any porous cloth may be used), and then fill an upper story with forest-leaves over the mat. A chaff cushion, or a cushion filled with leaves, may equally well be used; but ordinarily a cushion filled with any material is too compact to suit my views. I do not desire to have any upward ventilation to a hive, as most seem to understand the term; that is, I do not want a current of air to pass through the hive from the entrance to and out of the top; but I *do* want the covering over the frames to be sufficiently porous to allow egress to all foul air and excess of moisture. I give an entrance for air large enough, in my judgment, to furnish a sufficient supply; six or eight inches in length is sufficient for the largest stock.

With colonies prepared in the above manner, all the heat generated by them is economized just where it is needed. The "device" will allow the bees to cluster on top of the frames, or pass over them from one side or end of the hive to the other. Excessive moisture is conducted through the mats over the frames, and that with no perceptible loss of heat. The cover of the hives I should say should have a 1½-inch hole bored in each end of the gable, with guards placed over them to prevent rain and snow from driving in. With the preparation I have described I feel full confidence that my bees will winter safely, and have no hesitation in advising others to adopt the same in their own apiaries.

Foxboro, Mass., Aug., 1883. J. E. POND, JR.

I believe, friend P., I entirely agree with you in regard to winter preparations. That chaff cushions are too dense, I have felt satisfied. A covering of burlap and then forest-leaves, it seems to me, will be about the thing. And it will be, too, in accordance with many facts that have pointed strongly to the need of more ventilation during severe cold weather.

ANOTHER VALUABLE FACT, SHOWING HOW BEES GO BEFOREHAND TO HUNT UP A LOCATION.

A COLONY OF BEES GOING INTO A HIVE INFESTED WITH MOTH.

I WISH to send you a few words, so as to report how bees are doing this year in New Orleans. Willow began to bloom in January; bees gathered a good yield from it — enough to last them one month, to rear brood. We have had a good season from that time till about June 15. The swarming season began as early as the 28th of March, until about April 20. So you can see for yourself that we had a good spring for the bees.

I have no bees at present for myself, but I am in charge of those of my stepfather, which I manage for him. He began the season with three swarms; increased to six by natural swarming; one hive gave him two swarms; the other two gave him but one each, and one he bought of a friend for $1.50, which made 7 hives of bees. That was about April 12.

Now I should like to ask you a question regarding a swarm of bees which went to a hive which was in "charge" of millers. I saw, on the 30th of March, some bees flying in and out of said hive. When I went to see what the "ups" was with those bees, I found them to be a pure strain of Italians working very busily. I put my ear to the hive to hear if they were humming, and they were. That was in the evening. Next day I went to look again; then I found only a few dozen flying about the hive. Some would go in, then some come out and fly away. I watched them till about 9 o'clock, when, to my surprise, I heard some humming come from the southwestern direction. The wind was blowing just a little then from the direction whence I heard that humming come. All at once I looked at the hive, when I saw those bees pile into that hive where those millers had made their home. No sooner were those bees in with those millers than the latter got the "grand bounce." They brought millers out that were fully 1½ inches long. It took the bees a day and a half to clean out that hive. I have the bees in that hive yet, and in a very good condition up to date. Do you think that those bees which were so busily at work the day before were some bees from that swarm that went into the hive, or not?

GEORGE A. SCHAFER.

New Orleans, La., Aug. 22, 1883.

To be sure, the bees you saw were from the same swarm you saw going into the hive a few days before. They had evidently gone and looked the premises over, and decided that, with a proper force, such as they could muster, they could easily clean out the moth worms, webs, and all; and after having thus decided, they just "went and did it." I think if I were you, friend S., I should be a little proud of that colony of Italians. We thank you for the important link it furnishes in this queer matter of looking up a location before the colony swarms. For years I have had this matter in mind, and now I am more than ever convinced that if those bees would go into a hive full of webs and worms (the most disagreeable things to a bee the world contains), we could certainly arrange hives so tempting to them that our new swarms will, when they get in the way of it, come in and occupy them "of their own sweet will."

AN OBSERVATORY-HIVE WITH THREE FRAMES.

AND SOME INTERESTING FACTS IN REGARD TO ITS MANAGEMENT.

IT has been well said by Prof. Cook, that every bee-keeper should have an observatory-hive — not only for his own instruction and amusement, but also for his family and friends. Prof. Cook has one which he has placed on the window-sill; and when wanting to examine it, he raises the lower window-sash in order to do so. My own is placed just inside on the window-ledge, and an entrance is made in the lower part of the sash. To make a profitable use of it, the hive must accommodate the same frame that is used in the rest of the apiary, although of course, a less number (three, I find) will work to the best advantage. If you are using a narrow frame in your apiary it will be better for your observatory-hive, as it can then rest on the window-ledge, with the entrance at the end of the frames, so that, by having both sides made of glass, more of the economy of the hive can be seen. I use the Jones frame, so that the hive, when in position, projects about seven inches behind the ledge, the latter being about that width. This might be considered a serious objection; but on trial it will scarcely be found such, as it will soon become part of the furniture of the room. To stock the hive, take two frames of bees and hatching brood, and one empty comb, and give them a laying queen. If you wish to make sure that they will have plenty of bees, and the two frames of bees and brood are not well covered, then give the third frame of hatching bees instead of the empty comb. It will not do to have them much crowded for room, so that, in a few days, if necessary, take away one frame and adhering bees, and give them a sheet of fdn. instead. By proceeding as above you will have your observatory-hive in good working order.

Now, to make a practical use of it and at the same time have the pleasure of seeing all the various workings of the same, you will find it advantageous to have one outside frame permanent in the hive, from which to supply itself with bees. Even this one frame will probably overstock it; but you can very easily reduce the number of bees by taking some away if necessary. By using three frames, as directed above, you will have two frames left to work with. Now, if you want to make the best use of your queen, take away the other outside frame (free from bees) every four or five days, at the same time removing the center frame in its place, and put a frame filled with fdn. in the center. By repeating this operation every four or five days during a moderate flow of honey you will find that the center frame of fdn. will be drawn out, some honey in several of the top cells, and nearly all the remaining ones filled with eggs, the remainder of which the queen will complete while the new sheets of of fdn in the center is being drawn out. In this way the frame you take away (if you take one every five days) has been in the hive ten days, and will therefore contain honey, some larvæ about ready to be capped, and the rest of eggs nearly hatching. In this way the frame you take scarcely ever has the queen, as she will probably be busy on the center frame. This does not make any material difference, as you are to brush all the bees off before taking the frame.

To facilitate this, make a box about six inches high, and without top or bottom, the latter being just the size of the top of your hive, and make the sides so as to slope outward. This will more readily catch any falling bees. We will suppose that you have the top of your hive covered with glass, which either lifts off or slides out; now, before opening the hive, close the blinds of any other windows in the room, lift up the window-sash where your hive is; and if you can open also from the top, so much the better. In this way you will never be troubled with bees in the room, as they very quickly make their exit.

Now for the frame of eggs and larvæ you have taken away. You will no doubt find lots of use for it, either to strengthen some weak colony, perhaps one that may be queenless, or give it to some strong colony that you may wish to rear queens from, or to stimulate them to early swarming. All this is much sooner done than described.

You will find that this hive will fully repay you for any labor bestowed upon it. It is very useful as a honey-indicator, as the flow of honey can easily be recognized by the progress made. One lesson of self-sacrifice I have been taught by its use: When the nights were cool, and we might suppose each bee would be looking after his own comfort, they would invariably be found congregated on the corners of the frames nearest the entrance, and so protect the larvæ by their own discomfort.

G. A. DEADMAN.

Brussels, Ont., Can., Aug. 12, 1883.

MAKING RAISINS, AND SOME OTHER MATTERS.

I HAVE just been taking a first look at August GLEANINGS, and have noticed friend Harris' inquiry for the method of making raisins. As I have two brothers in Southern California engaged in that business, I believe I can give a hasty outline of the method there practiced.

When the grapes are ready to pick they distribute flat boxes, or trays, through the vineyard, into which the grapes are picked, and left right there until they are about half dry; then a man starts in at the end of the row with one extra box, turns it over the first one containing grapes partly dried, then overturns them, leaving the grapes in the new box, with the other side of the branches up, then carries this released box to the next, and overturns it in a similar manner, and so on through the vineyard, and the grapes are left right there until nearly dry, when they are taken to an airy storeroom, where the process of drying is completed, and packing done.

But all this will be of no service to our Georgia friend, because, first, the climate will not permit of this treatment, as rains are liable to come frequently, which is not the case in California. Second, if he could succeed in drying his grapes successfully, they would be only *dried grapes*, not raisins.

No process of drying will make raisins of any grape grown in this country except those grown on the Pacific coast, where the climate is such as to produce the European varieties successfully. It is not the process of drying or curing that makes raisins; but raisins *grow*, and are simply dried.

IS IT FOUL BROOD?

Not long since I was invited to go out in the country about six miles and see a colony of bees said to contain foul brood. I opened the hive, took out every frame, and looked it through carefully, and found on one or two frames plenty of larvæ that had died and decayed before being capped over, but no *capped* cells that showed the usual signs of foul brood. The owner told me that the colony had been dwindling all summer, and finally he had run a second swarm into the old hive, which seemed to give new life for a time.

MRS. COTTON'S HIVE.

While I was at this place I was shown one of Mrs. Cotton's Controllable bee-hives, with a colony of bees already in it. He paid $8.00 for the hive, and something over $3.00 for getting it here by express, making between eleven and twelve dollars for a hive that I should think could be manufactured for $2.50.

IS THE GOLDEN AGE DAWNING UPON US?

If not, the Golden bee-hive certainly is. I am informed that there has been a man in Hudson, in the western part of this county, selling the Golden bee-hive and farm-rights this spring and summer — one hive and one farm-right for $10.00. Cheap enough, if a tenth part of the claims made for it are true, and I don't know but they are, for I haven't seen it yet. D. G. EDMISTON.

Adrian, Lenawee Co., Mich., Aug., 1883.

BEES AT PUBLIC PARKS AND MUSEUMS.

AN INTERESTING LETTER FROM OLD ENGLAND.

I AM surprised that our Parks Committee do not keep these interesting creatures in our parks and museums, to instruct and interest the thousands of our men of toil, many of whom do not know what a honey-bee is. The expense to the Parks Committee would be very trifling, as I proved by the swarm of bees I took to our Red-Park Museum on the 3d of July, 1862. The bees were in one of my improved observatory bar-frame hives; the four sides and the top were composed of glass. The hive was placed near one of the windows over the principal entrance to the Museum, a hole being cut in the bottom of the window-frame, for the bees to go out and in. The energetic curator, Mr. Plant, took charge of them, and he will confirm my statement, that during the 293 days the bees were in the Museum they were a source of endless amusement and attraction to thousands who visited the place.

The bees did very well in their new home, and I brought them back to Newton Heath to swarm, Apr. 22, 1863. The consumption of food was more than the usual average, amounting to 1 19-100 oz. per day; rather less than 1 1-5 oz. per day for the 293 days they were at the Museum. This I account for by the bees being in a warm room all winter, which made them active, and caused them to consume more food.

When the Royal Agricultural Society of England visited Manchester in 1869, I exhibited some bees at work; and one stock gained in weight 9 lbs. 9 oz., whilst at the show at Old Trafford. Bees will go four miles to collect honey; so they must have worked in the gardens around Old Trafford, much to the benefit of the owners of these gardens, as bees are the principal agents in the production of nearly all kinds of fruit and vegetables; so that it is not only honey we get from the bees, but nearly every thing we grow.

The great Mr. Darwin tried a number of experiments proving the fertilization of plants by bees. He covered over a quantity of beans with a very light net that prevented the bees getting to them; and where the bees worked on them they produced on an average four times the quantity of beans. Again he covered over a quantity of white clover (*Trifolium repens*), and where the bees got to it, it produced on an average ten times the quantity of seed. About ten years since I was going through the grounds of the President of the British Bee-keepers' Association, the Baroness Burdett-Coutts, at Highgate. In going into the peach-house her head-gardener said, "See what a quantity of peaches I have got set." I turned around and said, "You have, indeed; how do you account for it?" He said, "I have always kept bees to produce my fruit; but last autumn I got a stock of Ligurian bees, and they, being hardier than the common black English bees, got into the house when the peach-trees came into bloom, and I have more than double the number of peaches set I ever had before."

A large Lincolnshire farmer went to the Lincolnshire Bee-keepers' Association show at Boston, 1880, and he heard them say that bees were profitable, if properly managed, in bar-frame hives. So he thought he would try them, and got some in 1881. In Sept., 1882, he exhibited at the Association's bee show at Lincoln, 894 lbs. of honey that he had taken from his bees that year. He had also sold several hundreds of pounds. He got several sovereigns in prizes, and I awarded him the silver cup of the Association. He had also several acres of fruit-trees, and he was the only one in the district who had a large crop of fruit last year.

Bee-keeping is rapidly becoming a national industry in England. We have now thirty-four different County Bee-keepers' Associations, and four of the Queen's children are presidents of four different county associations. We have a Lancashire and Cheshire Bee-keepers' Association, with the Earl of Latham as president; and as patrons, the Duke of Devonshire, the Duke of Westminster, the Earl of Derby, the Earl of Beetive, Lord Egerton, the Bish-of Manchester, and the Bishop of Liverpool. Why should we send thousands of pounds annually out of the country for honey and wax, when we have it running away for the want of collectors at our own doors, doing nobody any good? WILLIAM CARR.

Newton-Heath Apiary,
Near Manchester, England, August 10, 1883.

Many thanks, friend C., for your very kind letter, and the many valuable facts you give us. I most heartily agree with you, and it seems to me nothing can add to the beauty of any garden or residence as do a few hives of gentle Italians, managed in such a way that visitors can easily inspect the workings of the interior of the hives.—May I take the liberty of saying, "Long live the Queen, and all her royal household" ? and may God be praised that they set such an example in the way of encouraging rural industry by taking right hold of the subject of bee culture in the way you have mentioned. I am glad, too, of the fact you mention, of the agency that the bees have in this matter of fruit-raising. I hope the time will never come again when superstition shall induce people to declare that bees are antagonistic to fruit-growing.

Heads of Grain,
From Different Fields.

FRIEND MUTH, AND HIS CHANGE OF BASIS.

FRIEND ROOT:— Allow me to apprise you of a change in my business. You are aware of the death of my eldest son, which occurred in May last. He had been quite a help to me. After his health was impaired he went to the country, and I had become accustomed to missing his assistance in my business; but he had taken upon himself the care of the farm. When I found there was no remedy for his unfortunate disease, my mind was made up to reduce my business.

My grocery and seed trade was unusually heavy the past spring and summer, while my honey trade kept growing steadily; and when the rush for supplies was added to the rest, I was crowded more than was pleasant to myself and business friends. I could take no time to write a postal card, unless it was absolutely necessary.

On Monday last I rented my store, etc., to a couple of good young business men, and sold them my stock of groceries. I will be found, hereafter, in my honey-store, on the corner lot, opposite the old store, which you perhaps remember.

"Pure Honey and Bee-keepers' Supplies,"
"Seeds and Pure Baking Powders,"
is my motto from now on.

Please give the above notice in September number of GLEANINGS, if possible, and much oblige,—

Cincinnati, O., Aug. 22, 1883. CHAS. F. MUTH.

Well, old friend, you have just done a good and wise thing. When I saw you last fall there in your store, I made up my mind that you must do one of two things—get a small army of boys and girls to run your increasing business for you, or let a part of it go. Well do I remember that corner where so many of the barrels were stored away; and when you get fixed for the supply business of the South, I shall be delighted to make you another visit.

BEES ABOUT TO BE BRIMSTONED; CAN THEY BE UTILIZED?

I am a beginner in bee culture under the new system; and as you have always been kind enough to answer my inquiries, I should like to trouble you again. I am situated in a location where bees are kept in some quantities in box hives, and numerous colonies "brimstoned" in the fall for their honey. Now, I can get any quantity of these bees; but how am I to winter them? I have no extracted honey; no combs, except perhaps about 25 or 30 partly filled when I prepare my bees for winter. Can I put them on fdn., and feed them sugar to such an extent that they will build it out and store syrup enough for winter, so late in the fall? Now, what I want is to know just what you would do to save those bees under those circumstances. W. G. FISH.

Ithaca, N. Y., Aug. 12, 1883.

Yes, my friend, you can fix them so as to winter nicely. You will have to give them four or five combs of fdn., the number depending on the size of the swarm, of course, and then you will have to feed them daily (providing no stores are to be had in the field, and this is usually the case, I presume, where bees are to be brimstoned) until they are in proper trim for winter. Keep them up at high pressure in brood-rearing, and lengthening out the cells and sealing up stores. It can be done almost without failure, if properly managed and finished up before the weather gets to be too cold. I should advise all who are new in the work, to try a few first. When you can make a few work and winter nicely, then try more until you can utilize all the bees to be brimstoned in your region. If you put in an Italian queen when you commence, by the time you begin for winter you will have a fine Italian colony that will well repay you for the time and sugar.

HONEY-DEW IN THE FIELD.

I notice the agitation of the honey-dew question is going on yet. The question is now settled with me and my neighbors. When I began to argue that the honey-dew was brought about by insects called aphides, my neighbors howled at the idea, and said it came from heaven. To prove the fact, one morning last week I went to an idle field where they were innumerable on weeds called by the old folks here, "farewell summer," and which comes into bloom about the middle of August, at which time the face of the earth becomes yellow in the place of green, when it is not covered with bees. Well, I broke off the top of a weed that had a lot of aphides on it, and carried it home with me to show some of the folks that were there the insects, as they said they had never noticed any of them. The thought of experimenting struck me while we were examining the aphides, so I just carefully fastened the weed with the insects upon it in the top of a small cherry-tree standing in the yard. The next morning about sunrise I stepped out to the tree, and the first thing I saw was a bee after the so-called honey-dew that had exuded from the aphides during the night, and the leaves of the tree directly under the weed upon which the insects were was "sploched" with honey, so that it could be tasted by myself and wife. Now, these are facts that can be proven. I am a poor writer; it may be that some one would like to question me; if so, I will take pleasure in trying to answer him. HENRY W. CARMAN.

Custer, Ky., July 25, 1883.

NECTAR IN CANADA.

Look out for a big honey report from Canada this year. Bees are storing honey by bucketfuls, and the average in this section will go a good deal over 100 lbs. to the colony. One Stratford man the other day took 112 lbs. of sections off one colony, and there is plenty of time for them to do a great deal yet, as the bulk of the crop was made in Aug. and Sept. last year. I notice in the *Beacon* of this week that Mr. Chas. Mitchell, of Molesworth, has taken 364 lbs. from one colony already, and 57 from a young swarm, which they gathered in two days. Perhaps we may come up to friend Carroll's figures, if the fine weather holds out.

WIDE FRAMES.

This is a little secret for bee-keepers. Any of the fraternity who intend splitting up their wide frames for kindling, as they are sure to want to sooner or later, had better "stop a leedle." If they wire them and put in full sheets of fdn., they will have the nicest kind of frames for extracting. Too bad, Uncle Amos, for you to invent them for sections. They make bee-keepers sing too much. Of course, they never swear, as I said before, and there are other objections too numerous to mention.

SMALL BUSINESS.

Last year a bee-keeper out in the country sold a lot of honey to Stratford store-keepers at 12½ cents, when the local men were getting 15 c. easily. Of course, he had a right to do as he pleased with his product; but when he sells the same class of honey in other towns a few miles away at 15 to 18 c., it looks as if he were bound to break down the smaller men here. I hear he has been offering to sell here at 10 c. this year, while local men are getting 12½ and 13 c. in quantities. It's kind of small business.

C. W. YOUNG.

Stratford, Ont., Can., Aug. 16, 1883.

We are very glad to hear of the bright prospects in Canada, friend Y.— I am sure that I have not heard that wide frames were to be rejected "sooner or later."— In regard to the difference in prices at which honey is sold, I know it is bad; but I think we are rapidly getting things in shape where this can not happen. Of course, nice honey will bring nice prices, just as nice butter brings nice prices; but a butter-raiser would not be very likely to sell his butter for 12½ cents in one place, and 15 at another, on the same lot.

AN INQUIRY IN REGARD TO SOURWOOD.

I will be obliged if some of your Southern correspondents will inform me, through GLEANINGS, how the sourwood (*Oxydendrum arboreum*) can be propagated with greatest facility. I have become interested in it by the notice of it in A B C by the representations of a neighbor, and by finding small bushes of it in full bloom. The seeds are so exceedingly small that I doubt if they will germinate. It would be difficult, too, to save them, for the five-lobed pod which produces them is pendant, and they doubtless drop out promptly at maturity. I wish some Southern correspondent of GLEANINGS would tell me, also, if it can be propagated from cuttings or twigs (as is now done, I believe, with most trees), and the right method of doing this.

J. A. G.

Tuscaloosa, Ala., Aug. 14, 1883.

Please answer the following: Can honey be extracted from frames that are not wired, without its breaking or coming out? I have ten stands of bees, all in Simplicity hives, and have wintered successfully for the last four winters on their summer stands, having them packed in chaff. I must say, to the credit of the Waterbury watch, that I have been carrying one for about thirteen months, and it gives perfect satisfaction.

D. CONGLETON.

Heslop, Ohio.

Why, friend C., extractors were used years before any such thing as a wired comb was known. In fact, it is only about three years since wired combs came into vogue; and, come to think of it, it is wonderful to see how rapidly they have come into general use. Your question illustrates it well.— I am glad to hear so good a report from your Waterbury.

ITALIANS, AND THEIR ABILITY TO REPEL DISEASES.

At the time I wrote the article published on page 256, current volume of GLEANINGS, I had but little practical knowledge of the Italian bee, and all that is said in it relates exclusively to the common black variety; but in the latter part of April I received thirty 4-frame Italian nuclei from Mr. Viallon, and I have been experimenting with them in regard to the brood-plague mentioned. I find that they do not seem to be affected by it; and when introduced into a diseased colony they soon overcame it. Early in June I removed the queen from the only hive of blacks I had left; and after waiting some eight days, and destroying cells so that they were hopelessly queenless, I introduced a frame of Italian brood, with the bees that adhered to it, from which they raised a queen; and although the colony was badly diseased, there does not seem to be a vestige of the trouble left. I have also furnished brood to several neighbors for the same purpose, with equally satisfactory results. Of course, I am highly pleased with Mr. V.'s stock of Italians, as they have also done very well in other respects. Are the Italians affected by foul brood the same as the black variety?

MILTON HEWITT.

Perryopolis, Pa., Aug. 13, 1883.

Friend H., it would seem in your case that the extra vigor of the Italians drove out the disease as they drive out the moth worm. Yet I am inclined to think the disease you have described was in some way inherited, and hence a healthy queen of any race would eradicate it. I think this is never the case with foul brood; and, so far as I know, the Italians are affected with this equally with the blacks.

MAKING NUCLEI; HOW TO MAKE THE BEES STAY.

That Doolittle has been and gone and stolen my discovery! Well, I guess he discovered it first. I am only a beginner in the bee business, and make my artificial swarms by making nuclei and building them up. Last year I merely took several frames of brood and bees, and let them raise a queen when I hadn't a queen-cell for them? but sometimes it was slow work. This last summer I moved a queen with two or three frames of brood and bees, and they built up splendidly, leaving the old colony to rear cells. I did so again, giving cells to old colonies. I was pleased with the result, and thought I had made a discovery. Now here comes a sample copy of the *Bee-Keeper's Guide*, August number, with a Doolittle article, copied from the *A. B. J.*, in which he states that the old plan is not very good, because so many bees go back to the old stand. He then explains how he discovered that by taking the *queen* along, in making nuclei for queen-rearing, the bees became fixed in their new habitation, and then the queen can be returned in a few days, and be ready for business. He says such nuclei can be depended upon every time. Truly, "great minds run in similar channels." Doolittle and I —— ——!

"WHITE CAPS."

Your rule for telling when a colony has a laying queen by the "white caps" at the upper edge of the frames must have some exceptions. Honey has been coming in rather slowly until within a few days, and now almost the only one of my ten hives that shows any "white caps" is the only one that has not a laying queen.

BURDETT HASSETT.

Howard Centre, Iowa, Aug. 11, 1883.

WATERING-PLACES FOR BEES.

I will tell you how I water my bees. I have a trough made of two 6-inch fence boards, which I place under the drip, or lead trough that carries off the waste water from the pump. I take a well-washed piece of cotton-cloth (old is the best, I think), wet it well, and then place one end in the trough down into the water, and let the other end hang over the edge of your trough; let the longest part of the cloth hang outside, and it will act on the same principle of a siphon, but will keep wet all over all the time, and the bees will soon take to alighting on it for water. Dark-colored cloth is the best, I think, because it looks most like a piece of wet wood.

WHY ARE BEES AND IMMATURE LARVÆ THROWN OUT BEFORE THE ENTRANCE?

What makes the old bees throw out of the hive the young brood? Sometimes the young bees look as if they were almost ready to come out of the cells, and some look as if they would come out in a week, and sometimes the worm, or larvæ, is thrown out. Don't say it is for the want of room to store, because I looked after that, and they have plenty of room to work.

VENTILATION.

How shall I ventilate my gums best when I am working the honey-sections? **W. L. High.**

McLean, Ill., Aug. 19, 1883.

I do not think it is because they lack room, friend H., but because the larvæ, or young bees, thrown out are imperfect in some way. The ravages of worms in the combs often injure a large amount of brood; and where this is the case you will find they are thrown out of the entrance very early in the morning. Unless you look quite early you may not find them, for small birds have a habit of going around among the hives, and gathering up all this stuff brought out during the night.—See the recent articles by Langstroth and George Grimm in this matter of ventilation for comb honey, friend H.

SMOKER FUEL.

I have used the dry "toad-stools" from old fallen timber this summer, with satisfactory results. It holds fire longer than any thing I ever used. I see in your comments on page 509 of Gleanings, 1882, that you thought it would be impossible to secure enough of it. I think I could furnish several cords of them to friends who would be willing to pay, say 25c. per bushel here. I do not find any trouble in breaking them when dry. Take a hatchet in one hand, toad-stool in the other; lay it on a hard-wood block near the side of your wood-shed, and let the pieces, as they fly, strike it. You will soon have a nice pile of the very best fuel. I keep the tin oven full of the stools all the time, at the risk of being scolded by the women folks. **A. R. Crosier, 12.**

Fair Haven, Cay. Co., N. Y.

FIREWEED.

The July No. of Gleanings is at hand, and I am much pleased with it. Bees are doing well. This is my first year with them, and I think I shall have to send in my report when the season is over.

I inclose a stem of flower and a few leaves of a honey-plant, which is called elkweed, or fireweed here. I should like to know if you have it, or what you know about it. If you would like some seed, I think I can send you some this fall. There is probably 2000 acres of it within reach of my bees, and it blooms from the middle of June till frost.

Frank S. Harding.

Willamina, Yamhill Co., Oregon.

Thank you, friend H. The plant you send is probably *Epilobium angustifolium*, or Great Western Fireweed. Concerning it, the botany says: "One of the plants that grow up abundantly everwhere northward, where forests have been newly cleared and the ground burned over. Simple-stemmed, smooth, with lanceolate leaves, and a long succession of pink-purple leaves." With 2000 acres of it, there is certainly no need of planting honey-bearing plants. I should be glad indeed to see a sample of the honey. We mail you to-day a little block, inside of which is a small vial. I wish you would fill it and mail me a sample. I presume this is the great honey-plant that has been spoken of in Maine, that yields more honey than the bees can possibly gather.

WHAT BECAME OF THE EGGS?

In looking over my bees to-day, I found one that I had given eggs to raise cells, two days ago. Well, I found no eggs, and I thought here is a case of transferring eggs; but on looking very carefully over every frame in the hive I still can find no eggs. Now, what do you think the bees have done with those eggs?

CARING FOR SWARMS ON SUNDAY.

"Six days shalt thou labor, and do all thy work." This is the law, friend Root; and where you find the exception, mentioned on page 467, Aug. Gleanings, I do not know. Will you please inform the A B C class the chapter and verse? **D. M'Kenzie.**

New Orleans, La., Aug. 11, 1883.

I have noticed eggs being gone when they were given to certain colonies for queen-cells; but I have never been able to explain it. Can any one help us here?

Friend M., the text I had in mind was as follows: "What man shall there be among you, that shall have one sheep, and if it fall into a pit on the Sabbath day, will he not lay hold on it, and lift it out?" You will find it in the 12th of Matthew. I presume if the fence should be blown down, so the sheep was in danger, the spirit of the text would prompt that we go after him, even though we should go several miles, and then put up the fence. In this case some labor would be necessary on this day, in order to save valuable property. Of course, we should strive to avoid the necessity of doing any labor of this kind on the Sabbath, as far as possible to do so. If there is any way to prevent swarms coming out on the Sabbath-day, such as Jones's entrance-guards, etc., of course any Christian bee-keeper should try to avail himself of such means. However, if swarms do come out on this day, as I understand the spirit of Christ's teachings it would be right and proper to take care of them. If they are found hanging on a tree, I should say it was a Christian duty to hive them properly. If I started for church, and on my way saw a swarm of bees hanging on a tree near my apiary, I think I should hive them before going further, even at the risk of being late to church. At the same time, I think I should try very hard to avoid the necessity of having any one in my employ kept from going to church on account of bees swarming. Am I not right about it, friends?

INTRODUCING.

The queen you sent me came to hand in good condition. I had quite an experience introducing her, for an A B C. I had a very cross colony of hybrids. It took a week before they would receive her; once when I was smoking them off from her she flew away, but soon came back. A. Trueblood.

Fountain City, Ind., June 23, 1883.

FRAMES OF OLD AND SOURED HONEY.

I have some honey in frames, which has soured. Is it of any use? The bees died. Wm. M. Young.

Nevada, O., July 14, 1883.

Yes, sir, lots of use. Just give those combs, one at a time, to colonies raising brood rapidly, and they will manufacture that old honey into young bees, and have it out of the way, besides fixing the combs all up in nice trim.

WHERE DID THE QUEEN COME FROM?—HONEY FROM CORN.

In the swarming season I divided a strong colony of Italians, putting the old queen on a new stand; two days after, the queenless colony cast a swarm. I hived them, giving a frame of unsealed larvæ. In two more days I examined them and found eggs in all, or nearly all, empty cells. I looked farther, and found a dark-colored queen, while the mother-queen was light. Where did the dark one come from? Up to that time I had not lost any laying queens. I hived an after-swarm, and gave them a frame of unsealed brood; but in about an hour they came out again and clustered in the same place they did the first time. I found the queen on a sunflower leaf; killed her (she being a hybrid), and united the swarm with a nucleus. Why did they leave the hive when they had brood in all stages? They had plenty of room, and were removed to their stand in the shade immediately after hiving the first time. So you see that unsealed brood will not hold them every time. I practice giving each after-swarm a frame of brood when hived, and this is the only instance of their leaving it. My bees have been gathering honey from corn for the past week—not from the tassel, neither from the silk; but where the blade comes out from the stalk. I have seen and watched them while gathering the honey. J. H. Eby.

North Robinson, Ohio, Aug. 5, 1883.

Friend E., I can not tell where the dark-colored queen came from. If you were not sure it was the old queen, I should have said she had left the hive and gone home again.—It is now pretty well proven that the stalk of the corn does sometimes furnish honey, or a sweet substance.

WIRED FRAMES, ETC.

The season for honey has not been very good. We have had lots and lots of white clover, fields and roadsides white with blossoms, but not much honey — only enough to keep up breeding, and develop the swarming mania. Bees have therefore swarmed a great deal, and the demand for hives and fdn. has been good — more than I was able to supply. When a man has once hived a swarm on wired frames of fdn., and sees the nice straight combs built out, almost as if by magic, he thinks he is not using his swarms fairly to require them to *build* their combs, and is very willing to pay for the fdn. I tell them it is money well invested; for if the bees die, the combs will be worth more than the fdn. cost. We have had a great deal of rain this season, which is probably the cause of the poor yield of honey from clover. Basswood did quite well, and bees got to work in sections quite freely; but the weather was not good — cold and wet and windy — only several nice days. The past week we have had rain every day. All kinds of bloom are, however, prospering; and with good weather we may get more honey yet. Two years ago we got the bulk of our honey in August. E. C. Long.

Williamsville, N. Y., Aug. 3, 1883.

WHO SHALL BE THE LOSER?

I sent a man a dollar queen last fall. She had a good appearance, and was laying well before being shipped. This summer, about a month ago, she was returned to me, the man stating that she was entirely worthless, not laying enough to keep the colony up. Please let me know the reason, whether the cause lay with me or with the treatment she received after she had been received. If the fault was mine, I must send him another; if his, he has paid only for his experience.

QUEENS RETURNING TO THE HIVE WHERE THEY WERE HATCHED.

I had a strong colony into which I wished to introduce a queen; so I took one from a neighboring nucleus, and introduced her safely. Upon examining the stock two days afterward I found eggs, but no queen. Happening to look next day into the nucleus from which the queen was taken, I was surprised to find the very same old queen back into her old quarters, as contented as you please, and the one which had just hatched, balled by the bees. I know that it was the same queen, from her appearance — being a very choice one. Is it a very usual thing for queens to act so? I never saw it before.

J. O. Facey.

New Hamburg, Ont., Can., Aug. 15, 1883.

Friend F., if your queen never laid at all after your customer received her, or if the eggs she laid were all drone eggs, I should say it was your duty to give him another queen, because the one he received from you was never of any value; but if, on the other hand, the queen commenced laying all right, and afterward turned drone-layer, or ceased laying, I do not think you should be held responsible; for queens, like all else of animated nature, are liable to die at any time. If you sold your neighbor a horse or a cow, and it should die within six months, would you expect to give him another? If, out of the kindness of your heart, you thought proper to sell him another at a low price, or bear part of the loss on account of his misfortune, it might be a kind thing to do; but I should no means say you are *obliged* so to do.—It is not unusual for a queen to go back in the way you state. I have mentioned the same thing in the A B C book, and many other cases have been reported. I do not know, however, that I have heard of one where the queen stayed long enough to get to laying. On this account it is a little unsafe to take a queen from one hive where she has been reared, and introduce her to another hive in the same apiary. I have sometimes thought the bees perhaps drove them out of the hive, and on taking wing they would of course remember the location they noted when they took their wedding flight. From the facts gathered it would seem, too, that a queen will remember the location she fixed on her wedding flight, even as long as a year or two afterward.

Old works on bees have been for some time past much sought for. Here is something printed from a paper nearly a hundred years old.

BEES 96 YEARS AGO.

Friend Root: —I have taken the liberty to send you by this mail a copy of *The Pennsylvania Packet*, an old newspaper printed in Phila., Pa., in 1787. It contains a short article on Bee-keeping. If you consider it of sufficient interest to copy in GLEANINGS, please to do so, and afterward return the paper on the wooden roller to me again, and I will thank you. The paper is a relic of value that I wish to preserve. J. G. BINGHAM.

McGrawville, Cortland Co., N. Y., Aug. 7, 1883.

ON BEE-KEEPING.

Many and great are the advantages to be gained by the inhabitants of these United States, if bees were propagated, supported, and preserved. Our soil and climate are inferior to none for this purpose. Not Egypt, Greece, Italy, Germany, France, England, or any part whatever of the whole globe, would exceed us in the quantity, quality, or flavor of the honey. Canaan, of old, could not with more propriety be called a land flowng with milk and honey, than America would be did we but improve all the means to produce these so valuable and so important articles, which we might do very easily; which would assist each other, when we annually extend such pastures as would increase both.

Beeswax for manufacturers, candles, and exportation will be a great motive to exertion, and perhaps emulation in this system; especially were a bounty given upon it by government. Wax candles would then be sold as cheap as tallow, and the quantity of wax, in American exports, would be very great indeed.

A writer observes, that were bees propagated, and supported as extensively as a country would bear, innumerable insects would be destroyed; which feed upon the honey in the bloom of trees, shrubs, and herbs. And that this would tend to expel those hosts of insects, which we observe floating in the air, playing in the rays of the sun, near the time of its setting; many of which we are in danger of receiving into our bodies by respiration, because of their smallness: much to the injury of our health.

If these observations are just, will not the increasing of bees assist in expelling the caterpillar and canker worm, which have so often destroyed the fruit of the apple-tree; whose young, often feeding upon that part of the bloom from which the bees collect the yellow down, which they carry into their hives on their legs?

This point would easily be decided by those persons who have trees near their bee houses, or in those parts of the country where bees are most frequent. Should the knowledge of any one prove this to be fact, that such trees are less frequently, or never attacked by these ravages, the world ought to be favored with the information.

Insects often feed upon that moisture which many trees, especially the chestnut, afford in very sultry days in summer; which the bees feed upon with great activity. This is sometimes called honey-dew, and is the sweet sap of the tree sweating through the leaf, and becomes honey; which, if more generally collected by the bees, would thereby serve to expel those troublesome and noxious insects. A FARMER.

—[New Hampshire Spy.

WHY DO THEY CLUSTER OUT?

My bees keep out on the alighting-board and side of the hive much of the time. Does it not indicate they are too warm? and should not the sack of chaff be removed from over the foundation-racks?

Lewiston, Me., Aug. 17, 1883. I. C. MERRILL.

Friend M., I do not think there is very much danger of their being too warm away up in Maine where you are. I think the reason must be, because there is not any honey to be found. I should overhaul them and hunt up the trouble. I do not think a chaff cushion would do any harm at this season of the year. You can start them out if you get to work at it right. There is never any need of bees clustering out when there is honey to be found in the fields.

RAISING QUEENS IN A HIVE HAVING A LAYING QUEEN.

I have been experimenting on raising queens in the same hive that has a laying queen. The first three hives I tried very early in the spring, failed; but on investigating I discovered what was lacking; and since, I have had no trouble, and raise them right along. I want those zinc strips to place in my division-board, and try to have my queens fertilized in the same hive, which I am satisfied I can do. I never could get them to raise more than from one to three cells at a time; but I think by combining some of the principles given in Mr. Alley's book, I can raise more. I am now raising them on Mr. Alley's plan, and am well pleased with my success so far.

HYBRIDS VS. FULL-BLOODS FOR HONEY.

I have just got three queens from Mr. Heddon. I am satisfied he is on the right track for the coming bee. My experience with the Italians for over 22 years convinces me that a cross is preferable. I never had more than one full-blood to come up to the hybrid, and that was two years ago. She just equaled a hybrid. This year my best full-blood, a long dark leather-colored queen, has given me 324 lbs. extracted, while my best hybrid, perhaps three-fourths Italian, has made 583 lbs., including 26 lbs. comb honey.

GOOD NEWS FROM CALIFORNIA.

I commenced extracting May 21, and the honey-flow has changed but very little, and this evening they are just roaring, as they have done nearly every day since spring.

HONEY FROM ALFALFA.

Our main and principal honey-resource is the alfalfa, which will continue to bloom yet for the next two months. J. F. FLORY.

Lemore, Cal., July 31, 1883.

Thank you, friend F., for your valuable facts. I know queens can be reared in a hive with a laying queen; but the matter seems to need investigation and experiment. —In regard to hybrids gathering the most honey, I am very much inclined to agree with you—at least to the extent that a small dash of black blood makes Italians better honey-gatherers.—I am very glad indeed to know that California promises so well this season; and particularly am I rejoiced to know that alfalfa is really a valuable honey-plant. Now, then, friends, if we can raise a forage plant that will pay, besides the honey it yields, we are on a safe road to start a honey-farm.

HONEY FROM WHEAT-STUBBLE, ETC.

Bees are doing well here this summer. Basswood lasted about two weeks. I see reports of bees working on wheat-stubble; but I saw them working on barley very strongly here. R. DUNFORD.

Young's Point, Ont., Can., Aug. 18, 1883.

Friend D., do you mean to say that bees work on the heads of the barley or on the stubbles, the same as on wheat? We presume the latter, although you do not quite say so.

DO BEES STING WITHOUT PROVOCATION?

I think, friend Root, that Andrea Norton has rather "got" you with regard to bees stinging without reason (page 405, July No.). My bees are not uncommonly bad, and I am not very often stung, and yet one of them came three or four rods from the hive and stung my face without giving any warning, and I wasn't thinking about bees either.

QUAKING ASPEN.

On page 390, Green R. Shirer seems to almost doubt whether the quaking aspen is properly poplar or not, because it is not *liriodendron*. Gray's Botany speaks of the aspen as a true poplar (genus *populus*); while the tulip-tree, *liriodendron*, is said to grow "140 ft. high, and 8 to 9 ft. in diameter, in the Western States, where it is *wrongly called poplar*." BURDETT HASSETT.

Howard Center, Iowa, July 23, 1883.

I believe you seek to make up statistics for the benefit of bee-keepers. My own showing is about thus: I had to start with this year — spring count, 21 colonies; lost six swarms; sold two; have now 35. I have sold 737 lbs. comb honey; 1550 lbs. extracted; in all, 2287, besides what we have consumed and given away. Sales have amounted to $295; expenses, $65; profit, $230. The season is over here, unless we should have some surplus fall honey, which would be chiefly from smartweed, the main fall supply in this section. CHAS. W. BUCK.

Midway, Ky., July 27, 1883.

CRYSTALLIZED HONEY-DEW.

THE REAL GENUINE ARTICLE, AND NO MISTAKE ABOUT IT THIS TIME.

FRIEND ROOT:— As Oregon seems to be poorly represented in the bee industry by its bee-men, I will venture a few items; and if any part is of interest to you, good; if not, why, it will be but little loss, any way.

To begin with, I will send you a little package containing cuttings from the fir-tree, which is coated over with honey-dew (so called here); it evidently oozes out, and thickens from the stem and leaf, and finally candies, as you see it now. Being white, it can be seen quite a distance. It is not on all of the branches, but in spots, or it appears in different places on the trees; nor do all the trees secrete it, for the majority of them show no traces of it. I could not detect any apis at any time upon it. Honey-dew has been plentiful this season, but candies on nothing but the fir. The flowers, too, have been full of honey, and I am inclined to think that honey-dew, and the nectar from flowers, is one and the same thing. May it not be, at least partly so, that the sweet passes off through the pores of the plant-leaf and flowers into the air and is condensed by the night air, or comes in contact with the dampness, arising from the earth, and settles in the form of dew? for it appears on dry leaves sometimes, as well as green.

The bee business has not received much attention in this State, for it has been considered a poor country for bees and honey; but now with the improved hives and other appliances used in modern bee-keeping before us, it dawns upon our minds that bees and honey may be produced here too.

THE HIVE I PREFER.

I prefer the Simplicity hive to all others tried thus far, for bees winter well in them for me, and I get from one-third to one-half more honey from them; besides, they are easily handled. I have some colonies tiered up four stories high, and nearly all three deep, with bees enough to fill them. I use starters full size in both one and two pound sections.

THE WAY I PUT IT IN.

I cut a block just the inside size of the section, out of ⅞ stuff, *square;* then nail this to another larger one, of convenient size to handle easily. Then drop the section down over the small block, which comes up about half way of the section, and press the starter down on the block, and, with melted wax, fasten it in about three places, and you have it square, with starter in center of the section, and straight. I suppose you will say, "Too slow." But it is good and sure. I laid aside the Parker fastener. I am satisfied that it pays to use full-size starters, for the reason that the sections are filled much quicker and more regularly. I use no separators; the bulged ones I cut down to size, and extract. The foundation used was made on the rubber plates, shipped to me from your house.

A WAY TO USE THE RUBBER PLATES.

I did not succeed well in running melted wax over the plates, and have made dipping-plates, and dip sheets of wax, and press while warm, or I warm them afterward in the sun, or over hot water; in this way it is a success. We have supplied fdn. for 100 colonies this summer — all that was needed. I made fdn. about once a week. If a sheet is torn or broken, it is easily mended by lapping the broken edges and pressing it in the plates. The bees drew out this foundation very readily. Our principal honey-plant at this place is the fireweed (*Epilobium Angustifolium*), and the honey is considered No. 1.

E. S. BROOKS.

Silverton, Oregon, August 12, 1883.

Sure enough, friends, we have it now. The branches and twigs sent by friend Brooks are coated so thickly with a beautiful white candy that the leaf can be slipped out, leaving an oblong ball or roll, not unlike what we sometimes find at the confectioner's. The taste is slightly aromatic, from the fir-tree; but otherwise it is much like fine cream candy. I should think the quality of the honey would be excellent. This is most wonderful. The branches look as if they had been dipped in hot syrup, and repeatedly coated until the covering is something like the tallow which covers the wick in the old way of making tallow candles. The substance has a sort of cooling taste to the tongue, something like the sugar in raisins, from which I presume it is a sort of grape sugar; but as honey is principally grape sugar, this would be nothing strange. When this accumulation is wetted by the dews of night, it seems to me it would give an unlimited number of bees work enough to keep them busy. If such secretions are common, it would seem that 1000 colonies, or even more, might do well in a single spot. I declare, if I could afford it, and Oregon were not so far off, I would at once go up there and investigate. Friend B., how many trees have you that thus exude honey? and over how large a tract of land are they scattered? Why do you not locate bees enough right near these trees, to utilize every bit of this wonderful sweetness? As it is candied so white and dry, I presume very likely it would candy in cells. But even if it did, it seems to me it would be beautiful confectionery even then. Do you see this state of affairs every season, or is it only occasional? and is it confined to special months in the season? is it on only one kind of a tree? Excuse my inquisitiveness; but it seems to me this is a matter of great moment. I would give one hundred dollars for such a tree on our grounds, without hesitation. I will carry your box of samples to the Toronto Convention; and if you can answer my inquiries in time to have the paper present there, we shall be very glad of it indeed.

I believe, friend B., your suggestion, that the honey from the plant might float in the atmosphere, is not considered tenable. Water evaporates; but sugar, never, unless it is burnt, and then it is sugar no longer, but caromel.

1000 LBS. OF HONEY EVERY 10 DAYS FROM 37 HIVES.

A GOOD PLACE TO RAISE HONEY.

PERHAPS it would be interesting to a few of you to hear from me again, although it has been a long time since I have written for a journal. I would say, that I have located at last in Fresno County, Cal., which I find to be as good a place as I could find for a honey-producing locality. One apiary of 37 hives, all of which were transferred and Italianized this season, since they began gathering honey has turned off 1000 lbs. every 10 days, and they are full again. This is an irrigated section, and, to the careful bee-keeper, there will never be a dearth of honey. To the new comer it is the barest-looking place a honey-man would be likely to settle in. Every place that is not irrigated is as dry and dusty as a desert. Alfalfa and Egyptian corn are the honey-plants of our section. The country is becoming better every year for bees, and will, ere long, rival any part of the world for honey-producing, and the quality is excellent. The Holy-Land bees are the best for this section. They are hardy, long-lived, strong-winged, and great layers; all the points combined make them the bees for us.

Selma, Cal., Aug., 1883. O. S. DAVIS.

Friend D., I am very glad to have you bring out the fact that honey can be produced in abundance by artificial pasturage and irrigation. When we get down to this we have got pretty nearly a sure thing on a big crop of honey every year. The alfalfa we are familiar with, but the Egyptian corn we do not quite understand. Who will tell us a little more about it?

HOW TO GET GOOD QUEENS.

FRIEND HAYHURST'S VIEWS ON THE SUBJECT.

FRIEND HUTCHINSON, in reading your criticisms of friend Alley's book I am led to infer that you have overlooked a suggestion by me on page 33, 1881, for I am quite certain that, if you had tried the method there mentioned, you would hardly advise cutting holes in combs to give the bees a chance to build cells. I used the method during the summer of 1880, and have used it ever since, preferring it to any that has been described. Perhaps I had better tell the story over again.

Get some nice stiff basswood, and cut it into strips ⅛x½ in., and as long as the bottom-bar of your frame; these are to be dipped in melted beeswax, and then nailed to the end-bars of empty brood-frames, one piece just below the top-bar, a second one about two inches below the top, and a third one four inches below the top.

Have your breeding queens deposit eggs in new foundation combs; and when they are just beginning to hatch, cut out strips about eight inches long, and containing one row of cells each. These strips are to be fastened to the pieces of wood that are nailed to the empty brood-frames, and on the inside of the frame. They are easily attached by "pinching" them on. They should be so placed that the septum will be below the lower edge of the strip to which they are fastened.

Your brood is now ready for the cell-building colony, and the place in the comb from which it was taken can easily be filled with fdn.

When the queen-cells are well started, it is a good plan to reduce the number by picking out the larvæ from alternate ones; the bees can then transfer the feed to other cells, and thus give the "babies" plenty to eat. I rarely have queens hatch from cells that contain no surplus feed. When the cells are about ready to hatch, I transfer them to the lamp nursery, each cell in a cage by itself. These cages are made in cases by boring 1⅝-in. holes in a ⅞-inch board, about the size of a Langstroth frame. Each case contains four rows of nine holes each; one side of the board is covered with wire cloth. On the other side I have narrow strips of tin folded V-shape, and nailed just below each row of holes. These are to support pieces of coarsely perforated tin, cut as long as the case, and wide enough to cover one row of holes. They are kept in place by buttons made of bent pins. The queen-cells are fastened in the cages by "pinching" them to the wood in about the position they occupied in the hive. A moment's inspection shows if any queens are hatched, and it is not necessary to visit the nursery more than four times daily.

The idea of the case of cages was suggested to me by friend J. D. Meador, of Independence, Mo. I have used them with success three years.

E. M. HAYHURST.

Kansas City, Mo., Aug. 8, 1883.

SOME SUGGESTIONS FROM C. P. DADANT.

THE DADANT HONEY-PAILS; VENTILATION FOR COMB HONEY.

DEAR MR. ROOT:—In regard to what you say in JUVENILE for August about the tin pails we use for extracted honey, allow me to say that there is one advantage with them which you do not consider. It is, that the 10, 5, and 2½ lb. pails can be used by the purchaser after the honey has been taken out, and this is quite an item in the sale of honey in pails. They are not very convenient for liquid honey, indeed; but as honey is handled mainly in winter, after it is granulated, they are then as safe as any thing else, and much handier. We have shipped honey in them as far as Montana, and had no trouble, whenever the honey was granulated.

I should also like to put in a hint in regard to the matter spoken of by Mr. Langstroth; i. e., ventilation in summer. There are two risks to run in summer—too much ventilation, and too little. In June and July we have had numerous cases of comb melting by want of air, and extreme of heat. For the last 3 years we have been in the habit of raising the hive 2 inches from the bottom-board, and of leaving a space of an inch at the junction of the upper and lower stories, by setting the upper story 1 inch back. This leaves a chance for air to circulate in extremely hot weather.

We consider that, whenever bees lie out of the hive in clusters, they are too warm inside, and they need air. So this for us is a rule; and if any colony clusters outside we give them more ventilation, and keep increasing the ventilation until they manage to find room for all inside. Of course, the other extreme is as bad. If you have too much space, and the bees lose their heat, it will be injurious. But I would rather see them with plenty of ventilation than have them cluster outside, because the hive is too hot for them to remain, and I often pity the poor bees that belong to some of the old fogies. They are willing enough to work; but what can they do, 50,000 of them, in a hive 12 inches each way, with an entrance one inch wide, and no other ventilation? No wonder they swarm to exhaustion; I would do the same in their place. If your readers will try this rule, *ventilation enough to keep all the bees inside*, I will warrant they will find it good.

C. P. DADANT.

Hamilton, Hancock Co., Ill., Aug. 25, 1883.

You are right, friend D. The sized pails you mention are perhaps a little more like an ordinary pail, having the cover to cover the whole top and slip over the outside, than the Jones pails, although the latter can be used as a pail also; but, having the cover smaller than the top of the pail, it is a little troublesome to get the goods out of them. Friend Jones suggests, however, that he has something more in the way of pails when we get up to Toronto. Thanks for your suggestions in regard to ventilation.

Notes and Queries.

SYRIO-ITALIANS.

YOU ought to see some workers of large yellow Italians in my yard mated to Syrian drones. 'Twould do your old eyes good to look. And Syrian queens mated to Italian drones make a worker just beautiful; yes, and they *are* workers too. I don't expect to ever have to feed again with such stock. I had 2 natural swarms this forenoon of the above mixture.

W. P. HENDERSON.

Murfreesboro, Tenn., Aug. 18, 1883.

[Friend H., we have quite a lot of those half Italians and half Syrians (or Holy-Lands); and although they are very nice bees, they are not storing honey now—at least, not enough so but that they would have to be fed if they hadn't old stores enough to take them through the winter. I have occasionally found colonies of this cross that get honey where the full-blood Italians did not seem to get any.]

DRONE FDN. FOR COMB HONEY.

Drone fdn. is not nearly as good as worker fdn. for sections. My experience in drone fdn. is about like friend Green's on page 446, Aug. GLEANINGS, 1883.

Hill Church, Pa. H. M. MOYER.

The 11th line in my communication, page 485, Aug. JUVENILE, should read: The whirlpool is one mile below the railroad Suspension Bridge, and the railroad Suspension Bridge is two miles below the Falls.

St. Davids, Ont., Can., Aug. 22, 1883. WILL ELLIS.

I extracted 40 lbs. of honey from one hive 11 days ago, and to-day I extracted 80 lbs. more from the same hive. That is not very bad. My bees are all working like tigers. Basswood is in full blast just now.

J. G. PARTRIDGE.

Newmarket, Ont., Can., Aug. 8, 1883.

BEES SOMETIMES LEAVE WITHOUT CLUSTERING.

I see some doubts in GLEANINGS in regard to bees leaving without clustering first. I will add my mite, by saying that one swarm did, anyhow; one of mine came out and left in less than three minutes; and, what *hurt me*, it was an *imported queen* that went with them.

S. H. MILLIGAN.

Portland, Ind., July 25, 1883.

You think that bees working on lilac is uncommon. Our bees worked lively on them this year.

ELMER SCHRIFTERKNECHT.

New London, Ohio.

PARSNIPS.

I had about a half-acre lot next to my garden that got set in parsnip seed, I suppose from the garden. It was thick. The other day I started to cut them all down, and, to my surprise, found thousands of bees busy gathering honey and pollen, so I left them. They come up every year, but I don't know what kind of honey they make.

JOS. PERKINS.

Mechum's River, Alb. Co., Va., Aug. 16, 1883.

[Thank you, friend P. I do not think we have ever had a report before of honey from parsnips. Our market gardeners who raise parsnips for seed can probably tell us something about this.]

EXPRESS AGENTS WHO SAY GOODS ARE NOT THERE.

I delayed sending to you to trace up our basket of things, because we sometimes find them stored away in the depot. We believed ours was there, and sent twice for it, and finally, after writing to you to have a tracer sent after it, it was found stored away in the express office. I am very sorry to make you the least unnecessary trouble. Bees are O. K.

SARAH J. W. AXTELL.

Roseville, Ill., July 14, 1883.

[It seems to me, friends, it is time some sort of a vehement protest were made against this state of affairs. If some penalty were decided on by the express companies that their employes would have to stand when they throw one out of the use of his goods that he has paid for, perhaps such cases would be less frequent.]

CAUTION ABOUT INTRODUCING WHEN THE BEES ARE DISPOSED TO ROB.

I think I have lost two more queens. I looked to-night; the bees were out of the cage. I found some queen-cells started, but it was too dark to look for the queen. It is not safe to open a hive in the day time. They got to robbing the other day when I was looking for a queen. I think that is the reason I have had such bad luck. When I find how many I have lost I will try my luck again.

WM. FOWLER.

Geneseo, N. Y., Aug. 20, 1883.

[Friend F., I presume a great many queens are lost in just that way. It is very bad to have the bees get to going like that. When they do, you want a bee-tent, or else you want to work by moonlight, as I have directed in the A B C.]

HONEY FROM COTTON.

I am sorry that I did not tell you to put a little of the cotton honey I sent you in some water, but suppose it is too late now. When put in water it makes a very delicious drink, as it has a very peculiar acid — more like citric acid. The flavor is caught better in water.

J. D. FOOSHE.

Coronaca, S. C., Aug. 20, 1883.

[Many thanks to you, friend F., for the sample of cotton honey. But to tell the truth, it was not admired very much at our table. The color is rather dark, and the flavor rather rank; and I remember now there was considerable acid taste — nearly enough, no doubt, to make fair lemonade. If you will send some more I will try it in a glass of water. By the way, does cotton yield honey ever year, or is it only occasionally? There has been quite a little discussion in regard to the matter.

My bees up to date have increased from 6 to 23, and over 350 lbs. extracted honey.

Wm. Humphrey.

Rodney, Ont., Can., July 30, 1883.

CABBAGE-PALMETTO.

Bees are not doing much now with us, but will be as busy as can be in about two weeks more, when cabbage-palmetto will commence to open its blooms.

La Grange, Fla., July 17, 1883. I. Mendel.

HONEY FROM THE BLACK-OAK.

My bees are working vigorously on the black-oak. I send you a sample of bud and blossom which I find on this tree, and which the bees are working on.

Calhoun, Ill., July 31, 1883. M. J. Harris.

I started in spring of 1882 with 4 stands; increased to 18, and took 400 lbs. of comb honey. Lost three in wintering; started spring of 1883 with 15; have increased to 37, but no honey to amount to any thing; has been dry here. A. W. Spracklen.

Cowden, Ill., Aug. 25, 1883.

What do you think of the new system of bee management, by Mrs. Lizzie E. Cotton, called the Controllable bee-hive? Amos Ives.

Ionia, Mich., Aug. 10, 1883.

[Friend Ives, we refer you to page 525 for our opinion of Mrs. Cotton and her system.]

BEES IN KANSAS CITY, MO.

Bees are still doing well in this locality. I have taken 4800 lbs. extracted and 430 lbs. comb from 91 colonies, spring count. They swarmed inordinately —107 colonies having issued; but by putting back and uniting I increased my stock only 23. The honey is all white-clover and linden.

Aug. 13, 1883. S. W. Salisbury.

A QUERY ABOUT HONEY-ROOMS.

Will J. W. Porter, who wrote about a "honey-room," on page 86, please to describe more particularly how the roofing-felt is applied, and how long it has kept him free from insects? can it be put on the honey-house already built? I am troubled by large black ants. M. Frank Taber.

Salem, O., July 26, 1883.

We got about down to the bottom of the ladder this spring, taking out only 10 per cent of live bees in one cellar; but they have come on wonderfully this summer, and we have over 5000 lbs. of honey, with the promise of as much more.

RAPID EXTRACTING.

We took out 500 lbs. in 4 hours, two men, and put the honey in firkins. Is that not good time for two men? M. A. Williams & Co.

Berkshire, N. Y., Aug. 7, 1883.

SOUR HONEY FOR WINTERING.

I had a good swarm last week, and have hived them. I gave them brood, etc. I have about 20 lbs. of old honey in frames, *soured* some. Will it answer to feed it to them on top of the frames after fall bloom, to fill up for winter? Wm. M. Young.

Nevada, O., Aug. 27, 1883.

[I would save the sour honey till spring, friend Y. So far as I have experimented in the matter, for feed in the fall it is sure to kill, every time.]

Bees are working well, but season is so wet that honey is thin, and capped very slowly. But the demand I have for section honey is wonderful. I can hardly drive through town but some of the grocers hail me to say their case of honey is all gone, and they *must* have some more this very day. I keep every thing sold out close. Walter B. House.

Saugatuck, Mich., July 23, 1883.

THE WEED THAT POISONS FLIES.

As no one has made any reply to our friend near Wilmington, N. C., in regard to fly poison, I will say that I have killed thousands of them with a weed that very much resembles the ground-cherry, although it grows much larger — sometimes four or five feet. It looks quite watery, and is full of ridges, and grows on rich soil around the barnyard. The leaves from the wild coffee-bean tree will answer the same purpose. David England.

Red Oak, Ellis Co., Tex., Aug. 12, 1883.

"A" SUGAR VS. NATURAL STORES.

This has been an extra good year for honey so far, and bees are still bringing it in. I always rob my bees very close, and then feed them up with the best A sugar that I can get. I let it boil 15 to 30 minutes; let it cool, and then pour it in the feeder, a tin box 5x6x2 inches, with a floating rack in it made of wood. I think that the more good sense that we make use of in the handling of our bees, the better.

I. A. Heichert.

Newcastle, Henry Co., Ind., Aug. 16, 1883.

A BEE-MAN IN TROUBLE.

I have 40 colonies of bees I wish to sell. I got badly hurt about two weeks ago—horses ran off with me, broke my collar-bone, dislocated shoulder, broke two ribs, and punctured the lungs. I was in poor health before; vitality low; doctor says it will make it harder for me to get along, if I *live*. If you or any of your readers can come and take them from my yard, I would sell very cheap for cash, as I don't expect to be able to handle them soon.

Samuel G. McQuiston.

Clarence, Ford Co., Ill., Aug. 27, 1883.

FRIEND BOLIN'S IDEA OF WHAT GOOD QUEENS OUGHT TO BE.

I see in the Juvenile for Aug. that those imported queens have arrived, and also that the best will not go around. Well, in case they are not *all* sold when this reaches you, send me a fair or dark one, it makes no difference about the color, just so she "makes the gravel fly" in the way of laying. Whatever kind you send, send the rest of the $6.00 in $1.00 queens with the imported one. If the imported queens are all gone, send $1.00 queens for the entire amount, as I have more calls for queens than I can fill. James Bolin.

West Lodi, Seneca Co., Ohio, Aug. 22, 1883.

HOW I INTRODUCE QUEENS.

First move the old swarm 3 or 4 rods, then set the new hive (with comb in it) in the place of the old one; in 5 or 10 minutes put your cage, with queen and bees in it, bottom up, on top the frames; withdraw the wire gauze so they can go into the hive; cover the top of hive and cage tight. The queen will go to laying the next day; the bees that are abroad will return to the new hive. This is dividing a swarm. In 3 or 4 days, if you wish you can take what is left of the old swarm, and transfer to the new. I never lost a queen in this way.

V. McBride.

Chardon, Geauga Co., Ohio.

[Your plan does very well sometimes, friend M., and then, again, sometimes it does not.]

THOSE CRAZY BEES.

If friend J. M. Harris' bees are mad, there is method in their madness; for while they are pretending to rake hay they are also raking up the fibers of wood, or lint, to use in brood-capings, eh?

A. A. FRADENBURG.

Port Washington, O., Aug. 11, 1883.

[I can't quite agree with you, friend F., although your explanation is ingenious. If, after they had raked and scraped a while, they could be seen raking portions of the fuzzy wood, I would accept your explanation; but I have watched, and have never been able to see that they scraped up any thing.]

PUTTING BEES ON FDN. DURING SEPTEMBER.

I write you for a little information. 1. Can 2 or 3 pounds of bees make enough this fall on comb foundation to keep them through the winter? 2. Since my old swarm turned out the last new swarm, they have apparently done but little good. One or two days after they swarmed last, I saw a queen in front of the old hive. What became of her, I don't know. Since then they don't appear to be doing any thing. I examined brood comb, and can not see any young bees. Do you think the queen is lost? It's very seldom you see a bee leave hive or return. The hive-box is almost full of honey. I placed a box on top, but they do not go into it.

J. W. STEVENSON.

Zanesville, Ohio, Aug. 14, 1883.

[Friend S., you can build up good colonies in the way you suggest, with three or four pounds of bees, if you get them right into business, and make them "climb." But unless you give them very careful attention, and make the queen raise brood largely, there is much danger of a failure.—The only way you can do any thing with the old colony that has swarmed, is to transfer them, for you must be able to see their combs, and know what they are doing, before you can decide what to do. They may be all right; for a colony, after it has swarmed, is usually pretty quiet for a week or two. The young queen would not be laying under ten days or two weeks, perhaps. See remarks in regard to building up in the fall, on page 536.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, SEPT. 1, 1883.

The Spirit itself beareth witness with our spirit, that we are the children of God.—ROM. 8:16.

WE have to-day, Aug. 31, 6190 subscribers. The highest number GLEANINGS has ever reached.

HALF-POUND honey-pails we are obliged to advance to $4.25 per 100, instead of $4.00, as formerly given. We have them packed 100 in a box, all ready to ship; the extra 25 cts. is to pay for the box and packing. There has been a great demand for the three sizes of glass honey-pails; but we hope soon to be able to send any of the three sizes promptly; namely, ½, 1, and 1½ lb. sizes.

SUPPLIES FOR ANOTHER SEASON.

AS WE have now a good force of hands to make work, or to put up orders, and comparatively little to do, we will, until Jan. 1, 1884, allow a discount of 5 per cent on all orders for fdn. mills; and on orders for bee-hive material, and implements for bee culture, a discount of three per cent, in addition to the discounts already mentioned in our price list. On goods from the counter store, we can make no further discounts than those already mentioned in the price list.

DECLINE IN FOUNDATION AND WIRE NAILS.

IN accordance with the drop in wax, we have reduced the price of fdn. as follows:

1 to 25 lbs., per pound	42c
25 to 50 " " "	41c
50 to 100 " " "	40c

By mail, the regular size will be 65c; 3 lbs., $1.80. By freight or express,

3 lbs., regular sizes, will be....	$1 20
5 " " " "	2 00
10 " " " "	4 00
25 " " " "	9 75

We have the fdn. ready to ship by first train, any size or any quantity. Very thin, for starters, 10c per lb. more than above prices. We can now make very thin in full L. sheets where wanted. Above prices are good until further notice.

We have also been able to make quite a reduction in the price of wire nails, and more too, they are now to be made of Bessemer steel instead of iron. For particulars, see new price list.

THE ONE-PIECE SECTIONS.

CONSIDERABLE discussion has come up in regard to the one-piece section, and some do not seem to see clearly what we intend to do about it. Well, there is nothing to do about it, that I know of, except to fight it out; in fact, there *is* nothing else to do. If Mr. Forncrook has no legal or moral right to the one-piece section, to give way to him would be like giving way to a thief because it is a difficult matter to arrest him. I have had counsel from an able attorney, whom I am to pay $25 a day, if I need him; and he says Mr. Forncrook can by no means make our sections an infringement, after what I have shown you of what Fiddes has made and used since 1873; and it seems to me any reasonable man must admit as much. With this before us, it is only a question of resisting an attempt at blackmail. But on the other hand, just as soon as it can be made to appear that friend Forncrook has a right to the sections, I will stop making them at once, and do all in my power to induce all bee-keepers to stop making or using any not of Mr. F.'s make. If Mr. Forncrook can give any satisfactory reason why he has a right to monopolize sections made of one piece of wood, our columns are always open to him; but until he can make some such explanation, it seems to me a Christian duty to resist him with all our combined strength, even if it takes the best lawyers in the land, and costs ten thousand dollars to do it. Most of you know how earnestly GLEANINGS has fought against humbugs and swindles in all these years that are past, and some of you know that I have been a great many times threatened. I want to be *sure* that I am right; and I am always glad of suggestions and advice. But while I *am* in the right, I hope I shall not be easily frightened out of what I ought to do, even if it takes large sums of money to maintain right.

SHORTLY after the notice in our last number, of our reduction in the price of maple sugar, we closed out the whole lot, so we shall have no more maple sugar until another season, except the little cakes on our 3-cent counter. Where these are wanted by the pound, they will be 18 cents.

THE IRON-JACKET HONEY-CANS.

A GREAT trade has sprung up in these. We are able to make a discount from our table prices as follows: On orders of 10 or more, a discount of 5 per cent; on 100 or more, 10 per cent. These can be shipped anywhere full of honey, or empty, without any crating.

FROM our notice in the last JUVENILE, many of the friends got the impression that we wanted to purchase black and hybrid queens. I am sorry we did not make it clearer. We do not want to buy them at all. We simply publish the names for the accommodation of those who want them. Our imported queens are all gone, even to the most indifferent one. We are waiting anxiously for the next fifty.

A NEW USE FOR THE QUEEN NURSERY.

WE have recently made the discovery, that the queen nursery is just the thing for putting fdn. into wired frames. Heat it up as for hatching queen-cells, having the temperature pretty high; slip the sheet of fdn. between the diagonal wires and the uprights, then hang them in the nursery until the wax is quite soft. Now imbed it with your roller and Easterday fdn. fastener, and you will find you can do it with great ease, and it will stay, even for a long shipment.

CONVENTION NOTICES.

WESTERN BEE-KEEPERS' ASSOCIATION.

The annual meeting will be held at Independence, Mo., on the 20th and 21st days of Sept., 1883. Special invitation to all bee-keepers. S. W. SALISBURY, Secretary.

OHIO STATE BEE-KEEPERS' CONVENTION.

The Ohio State Bee-Keepers' Association will hold a convention during State Fair week at the State Fair grounds, Columbus, O., commencing on Tuesday evening, Sept. 4. DANIEL SPEAR, *Sec.*

A meeting of the bee-keepers of Maryland and vicinity, and all interested, is called, by several prominent bee-keepers of this State, to assemble at the Bee Tent on Thursday, Sept. 6, at 11 A.M., for the purpose of forming a bee-keepers' association.

Baltimore, Md., Aug. 12, 1883. C. H. LAKE.

TO BEE-KEEPERS OF NORTH AMERICA.

As one of the oldest of your number, I desire respectfully to remind you that the Toronto Convention will afford us all an opportuntity of paying a well-earned tribute to the memory of our honored dead—Samuel Wagner, Moses Quinby, Adam Grimm, Richard Colvin and others, who did so much to elevate American apiculture to its present high position. L. L. LANGSTROTH.

Oxford, Ohio, Aug. 23, 1883.

BEE CONVENTION AT TOLEDO, OHIO.

The next annual meeting of the Tri-State Bee-Keepers' Association will be held on the 12th, 13th, and 14th of next September, during the week of the Tri-State Fair at Toledo, Ohio. It is customary to say that Messrs. So and So, "and other prominent bee-men will be present," etc., etc. Well, we have quite a number of "prominent bee-men" (prominent at home) in this region, and they know how to raise the bees, get the honey, cure foul brood, and winter the bees too; but if Mr. Heddon is well enough to be at the meeting and the fair, we will pump him on wintering, and Mr. Muth on foul brood, and Novice, if here, on general principles, and the editor of the *Bee Journal* to fill in where the rest lack. We do not expect to have any long essays or speeches. It being the week of the fair, we expect the great attraction for bee-keepers will be the Bee and Honey Show, and such bee-keepers and their friends as desire to stay several days can bring their "eatables" and blankets with them, and camp on the fair grounds. One or more tents will be provided for such as make application to me a few days before the fair, at a cost that will pay for the use of the tents, but we hope to be able to borrow tents and so save expense.

A premium is offered for the foundation-machine making the best foundation for the brood-chamber on the grounds, and two mills have already arrived for that purpose, and the makers of three other machines have promised to be here if possible.

A premium list with extra blanks, rules and regulations, railroad fares, freight rates, etc., will be sent free to all applicants. DR. A. B. MASON.

Wagon Works, Ohio.

From the American Bee Journal, of Aug. 22, 1883.

SOMETHING MORE IN REGARD TO EXCURSION RATES.

Mr. A. I. Root:—I have received a letter, of which the inclosure is a copy, from Mr. Hiel, manager of the Toronto Industrial Exhibition, which is the outcome of an application which I made to him to secure reduced rates for bee-keepers in the State of Michigan. As it would receive publicity through your journal, perhaps you will be kind enough to give it insertion. There are single-fare rates for the whole week of our convention. I inclose you, also, a clipping sent me by the Rev. L. L. Langstroth, anent cheap excursion rates from Cincinnati to Niagara Falls. As these Falls are only a short distance from Toronto, and the fares very low, many of our friends may, and no doubt will, avail themselves of this opportunity, whereby they will behold the grandeur of Niagara Falls, and also be present with us at the convention. The prospects are brighter than ever. D. A. JONES.

Beeton, Can., Aug. 25, 1883.

H. J. Hiel, Esq.:—Replying to yours of the — inst., would say that we do not wish to advertise any reduction from regular rates; but if there are any on our line who apply to you, and you will refer the application to me, I will furnish them certificates, on which they can obtain tickets to Port Huron or Detroit, and return, at excursion rates.

D. EDWARDS.

SUMMER EXCURSIONS BY THE BEE LINE.

Cincinnati to Put-In-Bay and return, $8.35; Cincinnati to Lake Side and return, $7.65; Cincinnati to Lake Chautauqua and return, $11.25; Cincinnati to Buffalo and return, $14.25; Cincinnati to Niagara Falls and return, $14.75.

All the places named above can be reached in twelve hours by the Bee Line. Tickets good to return until October 28, 1883.

BEE-LINE TICKET OFFICE, 108 WEST FOURTH ST.,
Between Race and Vine streets.
AND GRAND CENTRAL DEPOT.

FURTHER.

When you report rates of fare to Toronto, you can mention that tickets from Odgensburgh to Toronto, and return, for $8.00. If I learn of other rates I will inform you. GEO. W. HOUSE.

Fayetteville, N. Y., Aug. 28, 1883.

DEALERS IN
APIARIAN SUPPLIES!

We invite correspondence with dealers in supplies, and large consumers, as to furnishing their supplies for next season. We shall give such discounts and protection as will give them good profits, and still be an advantage for small consumers purchasing of them, avoiding the annoyances of delays, miscarriage, and shortage, and a great saving in freights, and cost of boxing and crating in small lots. We are now building a new shop which will have three or four times the capacity of our present one, and shall be able to fill orders to any extent. We have commenced the manufacture of a new hive, which meets the wants of experienced bee-keepers and beginners better than any thing we have seen. Send for circular of this hive. G. B. LEWIS,
Sept. 1, 1883. WATERTOWN, WIS.

PATENT FDN. MILLS. 6-inch, $10.00. 10-inch, $15.00.
2tfd WM. C. PELHAM, Maysville, Ky.

HOLY-LAND
AND
CYPRIAN QUEENS
AND
Farm Implements!

I have a fine lot of pure Holy-Land and Cyprian queens which I will sell for one-fourth more than Root sells his Italians. Also a few pure Albinos; they are light-colored, and very gentle.

I keep on hand, and can ship from the factories where made, a stock of Farm Implements, a two-horse corn-planter, with drill attachment; one-horse corn-drills that will plant in hills; a steel-toothed harrow in three sections, with lever to clear from trash, or pass over obstacles; spring-tooth harrows; common harrows, with 40 or 50 teeth; sulkey hay-rakes; sulkey cultivators, plow-sulkeys, etc. Send for Circular. tf

H. B. HARRINGTON, Medina, O.

CANADA ONLY.
Summer Rape Seed For Sale by
H. SMITH, Box 102, New Hamburg, Ontario, Canada. 8tfd

FLAT-BOTTOM COMB FOUNDATION.—High side-walls, 4 to 14 square feet to the lb. Circular and samples free. J. VAN DEUSEN & SONS,
Sole Manufacturers,
4tfd Sprout Brook, Mont. Co., N. Y.

MUTH'S
HONEY EXTRACTOR,
SQUARE GLASS HONEY JARS,
TIN BUCKETS, BEE HIVES,
HONEY SECTIONS, &c., &c.

Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers." 1tfd

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GEORGE W. BAKER,
—OF—
Lewisville, Henry Co., Ind.
Has 3000 New Illustrated Circulars (to give away) of
ITALIAN BEES, QUEENS,
Plymouth Rock & Brown Leghorn Fowls.
EGGS FOR HATCHING.
Also Extractors, Honey-Knives, Smokers, etc., etc. 3-2d

HEADQUARTERS FOR
Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular, containing directions for introducing queens, remarks on the new races of Bees, &c. Address
1tfd DR. J. P. H. BROWN, Augusta, Ga.

LOOK!
A Perfect MORSE Telegraph Instrument for beginners. Send for catalogue.
5-12d P. B. KINGSLEY, Greeneville, Greene Co., Tenn.

SEND postal for my 20-page price list of Italian, Cyprian, and Holy-Land Bees, Nuclei, Queens, and Apiarian Supplies.
4tfd H. H. BROWN, Light Street, Col. Co., Pa.

DADANT'S FOUNDATION.
—UNSOLICITED TESTIMONIALS.—

Nothing is better; your fdn. suits exactly.
Cincinnati, O., Oct. 23, 1882. CHAS. F. MUTH.
The finest and brightest I ever saw.
Adamsville, O., March, 1882. GREEN R. SHIRER.
Best I have used; no breaking down; bees take it readily. W. B. SPENCE, Sidney, Ohio, Aug. 31, 1882.
I like it better than any offered by dealers.
Baltimore, Md., Jan. 24, 1882. C. H. LAKE.
It is the nicest I have used. D. KEYES.
Louisville, Ky., June 20, 1882.
It is the best I ever saw. GEO. WUSTUM.
Racine, Wis., July 19, 1882.
Willing to pay 2 cts. per lb. more than for any I have seen. F. WILCOX, Mauston, Wis., Mar. 23, 1882.
The most perfect article that I have seen.
Christianburg, Ky. G. W. DEMAREE.
Very well satisfied. Bees worked on it finely.
Avon, St. Genevieve Co., Mo. WM. BLOOM.
Have used about 75 lbs. from ——, but I prefer yours. REV. W. BALLANTINE, Sago, Ohio.
Your foundation is the best. J. W. PORTER.
Charlottesville, Va., March 25, 1882.
The nicest I ever received. H. W. FUNK.
Bloomington, Ill.
Your fdn. beats them all. Bees draw it out faster. JOS. CROWDEN, Remington, Ind.
Ahead of any fdn. maker of the world.
Borodino, N. Y. G. M. DOOLITTLE.
I concluded to send to you, even if express is higher. Council Grove, Kan. D. T. NORTON.
I never saw any nicer. G. TISDALE.
Westfield, N. Y., March 31, 1882.
Better than any I have ever had. J. B. MASON.
Mechanic's Falls, Me.
Well pleased with the foundation.
Council Bend, Ark. GEO. B. PETERS.

We are working on a new set of machinery made expressly for us. But, friends, remember that, to fill all the orders, we need wax; and if you have some, please write us. We will pay a high price for it. Send for our retail or wholesale circular, with samples free. We sell also colonies, queens, and supplies. **CHAS. DADANT & SON,**
2tfd HAMILTON, HANCOCK CO., ILL.

FOR THE
OLD RELIABLE
BEE-SMOKERS
or Uncapping - Knives,
Send card for circular to
BINGHAM & HETHERINGTON,
ABRONIA, MICH. 3-tfd

Borodino, N. Y., Aug. 15, 1882.
Cyprians Conquered.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have; but at last I am "boss;" Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham & Hetherington.
Respectfully, G. M. DOOLITTLE.

GLASS JARS
SPECIALLY MANUFACTURED FOR EXTRACTED HONEY.

White flint, best quality and good shape to hold 1 lb., per gross (12 doz.) - - $4 00
" " 2 " " " " - - - 5 50
Second quality; very pale green; extra showy; 1 lb., per gross, - - - - 3 50
" 2 " " " - - - - - - 4 00
Free on ship, in 100-gross lots.
Perforated zinc queen-excluder, per foot, in 1000-ft. lots, - - - - - - 8c
THOS. EDEY & SON,
7tfd **St. Neots, England.**

KEGS FOR HONEY, ALL SIZES
8-9d E. T. LEWIS & CO., TOLEDO, O.

PURE QUEENS AND STRONG COLONIES

of Italian or Holy-Land bees, in ten-frame Simplicity Hives, queens reared this season. hives full of pure bees, and combs full of brood and honey. One colony untested (warranted queen) $7.00; less than five, $6.50 each; five or more, $6 00 each. If sent in old hive or shipping box, $1.00 less; with tested queen, $1.00 more by express. Safe arrival guaranteed. Queens on hand as usual.

W. B. COGGESHALL, Supt.,
Hill Side Apiary, Summit, N. J.

FINE IMPORTED QUEENS

JUST FROM BOLOGNA, ITALY, ONLY $5.00.

Select tested queens, young and prolific, - - $3 00
Tested queens, young and prolific, - - - - - 2 50
No more "dollar" on hand this year.

J. S. TADLOCK, Luling, Caldwell Co., Texas.

CANADA ONLY.

DOLLAR QUEENS BY RETURN MAIL.

H. SMITH, BOX 102, NEW HAMBURG, ONT., CAN.

CHOICE QUEENS

I am now up with my orders, and cull my queens down to the very best. Can send by return mail.

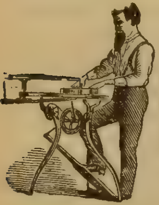
J. T. WILSON, Mortonsville, Woodford Co., Ky.

---

100 Pure Italian Queens.

Price reduced to 75c each for untested queens, for this month only. Discount on large orders. All queens bred from a select imported mother.

D. G. EDMISTON,
ADRIAN, - - LENAWEE CO., - - MICHIGAN.



BARNES'

Patent Foot and Steam Power Machinery. Complete outfits for Actual work-shop business. Lathes for Wood or Metal. Circular Saws, Scroll Saws, Formers, Mortisers, Tenoners, etc., etc. Machines on trial if desired. Descriptive Catalogue and Price List Free.

W. F. & JOHN BARNES,
Rockford, Win. Co., Illinois.
No. 2009 Main St. 11tfd

Oldest Bee Paper in America—Established in 1861.

AMERICAN BEE JOURNAL,

WEEKLY, at $2.00 a year.
MONTHLY EDITION, 32 pages, $1.00 a year.
THOMAS G. NEWMAN, Editor and Proprietor,
925 West Madison Street, **Chicago, Ill.**

SWEET CLOVER,

Fresh seed, 25c per lb., or will send 2¾ lbs. postpaid, for $1.00. Can sow fall or spring.

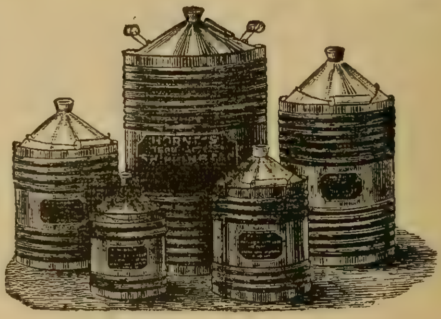
J. G. LEHDE, Gardenville, Erie Co., N. Y.

FOR SALE!

One 4 h. p. engine and boiler; also one 6 h. p. portable engine and boiler for sale cheap. Description, prices, and cuts, furnished on application.

O. H. TOWNSEND, Kalamazoo, Mich.

SHIPPING-CANS For HONEY.



"Iron-Jacket" Honey-Cans.

I presume the friends are aware that ordinary tin cans are not very safe for shipping full of honey, unless boxed or crated. The cans above are ready to be shipped anywhere.

PRICES.

1 Gallon,	$0 25 each.
2 "	.38 "
3 "	.47 "
5 "	.68 "
10 "	1.10 "

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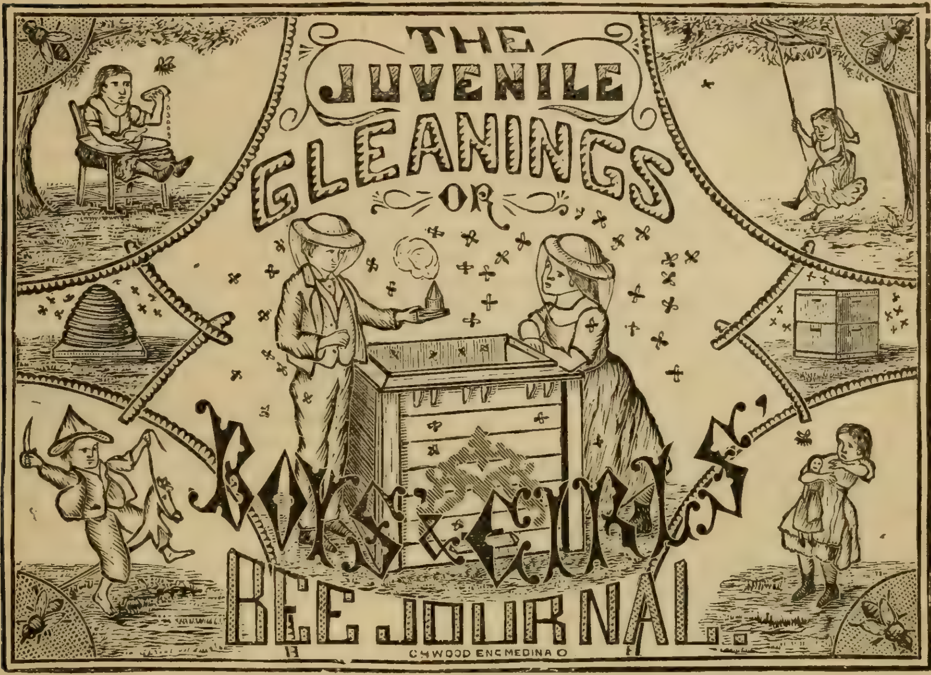

He that is faithful in that which is least, is faithful also in much.—LUKE 16:10.

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MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10:29.

MY little friends, within just half a mile from our factory is the county jail. I do not know how it comes, but in some way or other the unfortunate friends who get into that jail have seemed to be especially my neighbors for the past few years, and I confess I have felt very happy in being allowed to go in there and talk with them and get acquainted. After they have been there a while they get very lonely, and almost hunger for human companionship, or somebody to talk with, and so of course they are always glad to see me. Almost all I meet there are grown-up people; but now and then I find boys and young men, and just now a bright young fellow only sixteen years of age is the occupant of the room with its stone floors and grated windows. He was put in for horse-stealing—at least, so the papers said. Does it not seem a little strange that a boy of sixteen should think of stealing horses? When I first went in and took him by the hand I was surprised, and told him so. Said I, "Why, my young friend, is it possible you are the horse-thief we have been reading about?"

"Yes, Mr. Root," said he, "I am the horse-thief."

He smiled as he said it, but it was a rather sad smile. I sat down beside him and had a long talk with him, and he told me freely all about it. Just one year ago Ellsworth Sinclair (for that is his name) was a pretty good, honest, hard-working boy, and had never tasted any thing that would intoxicate. His father died many years ago from intemperance, and his mother married a man whom he did not get along with pleasantly. So he decided to go away from home and find a job elsewhere. He got work on a farm near Easton, Wayne Co., Ohio. Of course, he soon became acquainted with the boys of the neighborhood, and through them found out that the principal place for amusement was at the saloon in Easton, where they had a pool-table. At this saloon he learned to drink and smoke and play; and on the day before the Fourth of July a number of the boys were at the saloon as usual. Perhaps they felt a little patriotic, as boys of sixteen usually do the day before the Fourth, and so they treated and drank and played a little more than usual. Some time in the night our young friend lost all his money, and, crazed with drink, he declared to his comrades that he would have more money, and have it by the next morning. He had a horse and buggy of his own that he worked and paid for. He started out with this in the darkness of the night, and, when far enough away, took a farmer's horse out of the lot and drove until daylight, and then tried to sell it. No one would buy it, and, getting alarmed, he left it to be sold, saying he would call for the proceeds. Then he went back home and resumed his work, and heard nothing about the horse for several weeks. Do you think he was happy with this guilty conscience following him, and fearing every moment that some one might be approaching to arrest him? He was getting hardened in sin, however, and kept on drinking and going with his old companions; and finally one day he drove down where he left the horse, and, as any one of maturer years would have known, was arrested.

He tells me there are about ten or fifteen boys of about his age who are patronizing that saloon, and who are likely on the way to a fate similar to his own. The boy has done wrong, and should be punished, and it is right and proper that he should be inside of prison walls. But is he the only one to blame? I talked to him about his duty to his country and his fellow-men in having the saloon-keeper arrested; but with a boyish frankness he replied, "Why, Mr. Root, it would break him up. He has just paid about $200 tax, and has also paid about that much for a new pool-table. He told us he wanted to sell all he could to get square." Is it the boys alone who should be in prison, and punished?

In the town of Mt. Vernon, in our own State, a few years ago a boy of about the age of this one shot a comrade while under the influence of drink, and died on the gallows. This boy's father was also an intemperate man. When his poor wife laid him away in his grave she resolved that her whole life should be devoted to the task of keeping her baby-boy from intemperance when he grew up. No doubt she looked upon him as we look upon our own baby as he prattles and crows in his childish innocence. Did she succeed? He was a model boy until he was about ten or twelve years old. Then the saloon-keeper who sent his father to ruin called a crowd of boys into the saloon to have some beer. It didn't cost them any thing, you know. This boy, remembering his mother's teachings, refused to take any. "Oh! well," said the saloon-keeper, "you needn't take any beer, if you don't want it, but you can have some lemonade." It seems he thought it hard to refuse so kind an offer, so he took the lemonade. My dear friends, that glass of lemonade had whisky in it; and the boy's inherited appetite was aroused, and he became an inebriate, and died on the gallows. This same saloon-keeper was the principal witness who appeared against him. Before he was hanged he threw his arms around his poor mother's neck, and in his paroxysm of grief said, "O mother! is it really true, that I am the worst boy in the world?" Then they took him to the gallows, and hanged him; but, the rope broke; and while the blood gushed from his mouth and nose, they carried his limp form on the platform again, and fixed the rope and hanged him until he was dead. At the time of his hanging, the saloon-keeper sold more beer than he ever sold in one day before!

My dear friends, a few years ago they used to drown people and put them to death for witchcraft. What an awful blunder it was! what a horrible mistake did our people make! Are you sure we are not making a horrible mistake now when we hang our boys, sixteen or eighteen years old, because they murdered somebody while intoxicated? Does it necessarily follow, that these boys are the worst boys in the world? Is it not possible, that we are making a mistake yet, and hanging the wrong ones?

Shortly after this number reaches you, our people here in Ohio will have the opportunity to decide whether these saloons are to be kept scattered all over our land or not. Very soon all of you will have an opportunity of voting in a similar way all over the United States, for aught I know. Are we ready? The boy we have in our jail might have committed murder just about as easily as he did stealing, under the frenzy of liquor he had taken: with only a boy's wisdom and judgment he was likely to commit any crime that presented itself. Is it not possible, my dear friends, that your sons and brothers might, under similar temptations, be led away as he has been? Whose business is it to *right* this awful wrong? Who is my neighbor?

VIRGIL'S TREATISE ON BEES.

TAKING HONEY — VIRGIL'S COLD SMOKER.

AND if at length the honey you will take,
And in upon the noble mansion break,
Robbing the treasury, thy cheeks first fill
With draught of water to spray forth at will;
In hand before thee careful hold a smoke, (1)
Following the sprinkling as their door is broke. (2)

THE TWO HARVESTS.

Twice in the year the well-filled combs they take,
Two seasons of the harvest time they make; (3)
One when, 'mid Pleiades in starry space,
Taygete shows to earth her honest face, (4)
And from the ocean, at the dawn of day,
With eager foot thrusts the spurned waves away;
And one ere winter, gloomy and severe,
Descends from heaven upon the waters drear, (5)
While on from Pisces, charged with stores of rain,
The same Taygete swiftly flies amain.

GETTING STUNG.

—The bees—their wrath beyond all bounds exceeds;
Bereaved and plundered, as their foe recedes, [(6)
They thrust in poison with their pungent stings. (7)
Fixed to his chosen spot each warrior clings; (8)
Hid in the veins relinquished darts he drives, (9)
And in the wound with zeal they lay their lives. (10)

LEAVING SUFFICIENT FOOD.

But, if you fear a winter stern and rude,
You'll surely spare enough for future food;
You should have pity on their wrecked affairs,
And minds all torn with fresh-inflicted cares. (11)

THE EVILS OF TOO MUCH EMPTY COMB.

The force of mercy's claims why need you doubt?
Smoke them with thyme, and empty comb cut out;(12)
For oft unseen a lizard, sly and small,
Gnaws in the combs a place to snugly crawl; (13)
And bed-chambers are made that do invite
The cockroaches that scamper from the light;
The idle drone, lurking round empty comb,
On others' food doth make himself at home; (14)
Or cruel hornet, nesting there with ease,
In arms unequal wars upon the bees;
There the dire moth, which one hath cause to fear,

Finds rest and space a family to rear; (15)
Or spider, of Minerva hated sore, (16)
Hangs her loose webs in every cranny door.

BEES STIMULATED BY TAKING AWAY THEIR HONEY.

The more their honied stores are snatched away,
So much the more with sharp vehemence they
Devote themselves the ruins to restore,
Of their impoverished clan, and yet once more
They'll fill the chasms, from flowers enrich their homes,
And cap again the rough and yawning combs.

(1) I read somewhere in a recent journal of the *first discovery* of smoke for quieting bees. A poor Irishman (or was it a Scotchman?) for a trifling reward revealed the secret to somebody's grandfather; and thus the world became possessed of a very valuable piece of knowledge. Is there no limit to this sort of thing? Why, we must expect to hear soon that it was a Dakota girl who first discovered how to chew gum! Virgil makes no claim to discovering the use of smoke. That was very likely known centuries before him.

(2) This is very ingenious, and may be said to be the best method of dealing with bees known up to the time when modern smokers were invented. With a little practice a big mouthful of water can be ejected as fine spray. The "patent" feature of Virgil's arrangement is holding a smoke before the face and driving the spray through it. The bees are both sprinkled and smoked at the same instant, as the spray and breath carry the smoke along with them. More than this, the fine particles of water dissolve some of the smoke, and retain it so it does not immediately drift away as smoke alone would.

(3) It is the same with us. First comes the harvest of white honey, which our teachers advise us to take off before borders of darker honey are put around it, and later the fall harvest of various colors.

(4) Taygete rises with the sun May 18th. This would be too early for the main harvest of white honey in our latitude; but we must remember that Italy is further south, with seasons much more forward than ours.

(5) The poet's language here is florid and a little difficult, and critics are puzzled to know whether the date is the rising of the sun with Pisces, or with Scorpio, or with the Dolphin — or what not? I don't believe he intends any precise date, only to be sure to have it done before winter.

(6) Theory and practice do not always correspond, and it was the same in ancient times, it seems. In theory the bees ought to behave like little angels while the keeper is going through them; but in practice they would sometimes go for a fellow. 'Spects that the laurel-crowned poet danced and shook his robes, and lost the aforesaid crown off in the weeds, just as an ordinary mortal might do; but when the muss was over he sat down and figured the whole thing out very accurately.

(7) He knew, it seems, that there was a receptacle of poison attached to the sting.

(8) Doesn't he, though? And more than that, what astonishing wisdom he shows in choosing the spot! Three times as many will sting a thin spot on a glove, where there is some chance of doing execution, as will leave their stings on a thick place of equal size on the same glove.

(9) Even at the present day only well-posted persons know this. The dart of the sting is not single, but triple, and the two smaller shafts often separate and remain in the wound, when the victim thinks he has pulled the sting out.

(10) The opinion that the bee dies after stinging still prevails, and very likely is correct; but somehow the positive proof of it seems to linger strangely behind. This summer, after hiving a very cross swarm that wasted dozens of stings on me, I saw, some hours after, quite a lot of dead bees on their alighting-board. Had I not been hurried and heedless I might have examined to see if each one was minus a sting. In that case I should have had tolerable evidence that stinging results in death. Perhaps the children will say, shut up a bee after he has been stinging, and see if he dies. The trouble is, that *any bee* will soon die if made a prisoner.

(11) The curiosity of it is, that Virgil from first to last does not say a word about destroying a colony outright and appropriating their stores. He pleads earnestly that sufficient food be spared them, but not for their lives. I think it must be that, in warm climates, bee-keepers hardly ever destroy a colony. Instead of slaughter they just cut out all of the honey that is worth taking, and then leave them to live or die, according as the winter may prove open and flowery, or severe and barren.

(12) Here we have conjured up before us the keeper standing before a hive that is light in stores. Gentle Mercy says, "Spare them;" but he scratches his head, and draws up the corner of his mouth, as Greed whispers in his off ear, "Take the honey, and be sure of it; and may be they'll live through, any way." At this point the poet breaks in with his blunt question and command. The fumigation with thyme, I suppose, is to correct any bad smells that may be getting started. The number and magnitude of the evils that are counted up as resulting from leaving too much empty comb is almost startling.

(13) As lizards eat bees, this is rather "cheeky."

(14) A rather novel idea, and perhaps there may be something in it — that bees do not kill off drones so promptly and thoroughly when there is too large an expanse of empty comb for them to dodge away in. But queenless stocks are pretty sure to have unoccupied comb, and lots of drones also; and more likely that's the way the idea got afloat.

(15) I see no reason to doubt that this is the familiar bee-moth, well known to modern bee-keepers. And I suspect that the reason Italian bees fight moth-worms so well is that they have been steadily bred to it from ancient times; while to northern regions, where black bees live, the moth has spread in much more recent days.

(16) Minerva was a great weaver; and, on the principle that "two of a trade can never agree," she and the spider were enemies. There is also a tale told that an ancient lady once engaged Minerva in a matched trial of skill in weaving. Minerva got mad, and changed her rival to a spider. After this arbitrary act of wrong she will, of course, always feel mean and hateful whenever she sees a spider — just as we shall, children, if we wrong others, and neglect to set the wrong right again.

Richards, O., Sept. 8, 1883. E. E. HASTY.

Well, I declare, friend Hasty, if you haven't gone and fished up the idea of cold-blast smokers away back in Virgil's time! and he not only used cold air, but cold water also. Why not sweeten the water, and so both coax and drive the bees all at once in the same time? No doubt Virgil would express to you his most earnest thanks, friend H., if he could, for the able and scholarly way in which you have taken up his defense, and interpreted his words and bright thoughts to the bee-men of the present day.

BREAKING DOWN THE HONEY MARKETS.

AN EXPLANATION.

I DO not know whether I am the "bee-keeper out in the country" referred to by Mr. C. W. Young, on page 537, Sept. GLEANINGS, or not; but as I sold honey in Stratford last year at 12½ cents, and *afterward* sold it in other places at 15 c., wholesale, I should like to give some explanations.

Last year the honey-crop of Canada was very light; and, not knowing what price to set on mine, I wrote to Mr. D. A. Jones for advice. He advised me not to sell for less than 15 cents. When I offered my honey at that price in Stratford and St. Mary's, I was told all around that bee-keepers from a distance were offering it at 12½ c., and one store-keeper in St. Mary's showed me a letter from Mr. Jones himself, offering it at that price. I then began to think, that if I did not lower my price I should have to keep a lot over winter; so I sold about half my crop at 12½ c., to my sorrow, as, in a few weeks afterward, I might have got 15 c. for any amount. I thus lost about $50.00 by being in too great a hurry to sell. I afterward learned that the honey Mr. Jones was selling so low was old, and of inferior quality. Of course, the store-keeper would not tell me this.

In regard to offering it at 10 c. the present season, I had not made an offer in Stratford at all until a few days since, when the lowest offer I made was 13½ to 14, in quantity; but I found the town pretty well supplied by the "local men" at 12½, so I did not make any sales. I hope this will satisfy Mr. Young that I, at least, did not wish to do any "small business," or "break down the smaller men."

My loss last winter was 4 out of 77 colonies. The greater part of those that survived were very weak in the spring; sold 8 of the strongest, and three or four weak colonies, before the honey season commenced. Have taken, up to the present, over 9000 lbs. of extracted honey. There is probably 2000 more yet in the hives. I probably lost 3000 or 4000 lbs. by not being able to extract fast enough to give them room during the height of the honey-flow.

That a queen will sometimes sting, I had proof a short time since, having received a sting on the finger from a virgin queen that I caught as she was rising from the hive to join a swarm that had just issued. A. G. WILLOWS.

Carlingford, Ont., Can., Sept. 5, 1883.

Thank you, friend W., for the very courteous way in which you reply to those who have censured you. It were always well to bear in mind that there may be a reason we do not know of, when we are tempted to criticise the conduct of another. It is well, however, to have attention directed to this matter, and bee-keepers should be informed of the consequences of even a little carelessness in regard to the price at which they sell their honey.—I am very glad indeed to know that we have such good reports from Canada this season.

HONEY-LABELS FOR COMB HONEY.

SOMETHING VALUABLE ON THIS SUBJECT PROMISED BY D. A. JONES.

FULL well, brother Root, I knew I scribbled my last badly, but I did not think I said *honey-can labels*. I intended to say comb-honey labels. Now, section-honey labels will form one of the new and grand features of the exhibition, and those were the labels I said I would have ready for you to take home with you; and when parties see them they will not growl about mildewed sections, or sections made out of dark or common wood, so long as they are strong, and the labels entirely cover all the wood, strengthen the sections, and hide the usual defects in comb honey.

Now, I don't pretend to be a comb-honey man, but I let them practice, so they will be able to produce it if they wish; but if you should see some new features in connection with its production, at the convention, you must not be surprised; and if you can sell your customers labels that are so attractive that their comb honey brings in several cents more per pound, and sells twice as fast, you will be assisting them considerably. I will tell all who come to our convention how to introduce fifty queens into fifty queenless colonies (even if they are all fertile workers), in fifty minutes, and not lose a single queen; at least, so my experiments this season *prove*.

Beeton, Can., Sept., 1883. D. A. JONES.

Friend Jones, we certainly ought to be able to appreciate an invention that will make mildewed sections handsome; for during our great rush the past season, we have had some "sore troubles" when sections were long on the way, or a trifle too green. If you have managed to make a success of covering the wood of sections of honey, we owe you still another vote of thanks.

I have many times thought of this matter, and have tried putting labels around wooden sections; but it seemed to be quite a job to cover all the wood perfectly, and I did not make it work very well. I shall take great pleasure in noting your success in the matter.

THE BEES AND THE BABY.

THE STATE OF AFFAIRS AT FRIEND SECOR'S HOUSE.

IT would seem there is another household besides ours that is blessed with a new baby. Just see what friend Secor has to say about it. I wonder if any one besides bee-keepers could appreciate such a blessing as he seems to.

We have a new baby at our house. A baby is not such a novelty in itself, as we have had seven before. But they were all boys. This one is a girl. The first girl-baby creates as much interest at our house as the first swarm of bees. We are probably nearly as enthusiastic over its arrival as Adam was when the first woman appeared at his lodge. My time is now divided between the bees and the baby. My wife says it is hard to tell which has the stronger attraction to me. She maintains that this girl-baby is "sweeter than honey and the honey-comb." I have learned not to dispute her judgment in such matters. In fact, I more than half agree with her. It is not strange, then, if I leave the honey in the hive unextracted, while I extract joy and comfort from that baby. What with attending to the bees outside, and *tending* the baby inside, I am having a sweet time of it.

I can enjoy one during the day, and the other at night. Between the two sweet employments, you may imagine that I am kept busy. Sometimes the singing during the night is so interesting that I have to get up to enjoy it. The hum of the busy bee is nothing to the music of that baby. The former come home laden with all the autumn richness of the asters and the goldenrod, singing their "harvest home" melodies in a way that only an enthusiastic bee-keeper can fully appreciate; but that first girl-baby creates an enthusiasm in the neighborhood among the old maids and the young maidens, the married women and little children, equal to a bee-keepers' convention.

On one particular night this particular baby was more frisky than usual. Mrs. S. says it was a flea, and she knows it. The wicked flea, when no man pursueth, biteth the baby. Solomon knew what he was about when he wrote that; but perhaps he had to stop writing to rock the baby to sleep, and forgot to finish the sentence. It's a burning shame that the festive flea has been biting the babies from Solomon's time down to the present, and no one has invented a flea-trap.

"The bees are swarming!" Well, well! will they never stop swarming? They began in May, and, from present indications, I do believe they will keep it up till October. Every fresh spurt of honey they act as if it were always to last, and leave their unfinished sections to "multiply and replenish the earth." Talk about the wisdom of the bees! They don't know any more than that baby, who is now as wide awake as a fish, when she ought to be growing in baby dream-land. The bees show just as little wisdom and foresight in a great many other things as swarming so late in the season. Why do they toil all summer gathering propolis to stop imaginary cracks? Why do they rear ten thousand drones when only one is necessary? Why do they sting the hand that feeds them, just as quickly as one that robs them? Why do they refuse to accept a queen, if a fertile worker is in the hive?

There! the baby has the stomach-ache, and I must go and rock it. **EUGENE SECOR.**

Forest City, Ia., Aug., 1883.

Friend S., are you not afraid that was a wicked pun of yours when you perverted Solomon's wise saying in regard to the conscience of wicked men following them in some respects like a flesh-and-blood foe? May God bless that first girl-baby!

MRS. LUCINDA HARRISON.

WHAT SHE SAW IN CENTRAL PARK, ETC.

I AM in New York City, children, and I went to see Central Park the other day, and the first thing I did on entering it was to scamper off after a flower that I never saw before. It was blue, and belonged to the Ray family, and a lady informed me that it was chicory, and its roots are ground up to adulterate coffee with. Who can tell us some more about it, and whether it is a honey-plant? Now, don't speak all at once. I can see a good many hands raised.

The company I was with didn't care a fig about a simple wild flower, and hurried me into the museum, saying, "There, Aunt Lucinda, is Powers' Greek Slave." Sure enough, here was a white marble figure, with such perfectly formed limbs, with dimples and finger and toe nails so natural; the countenance had such a sweet, sad look, and the hands were chained. There was a great deal more sculpture, that I haven't space to tell you about. It is strange that marble can be cut to express love, despair, hatred, etc. I saw lamps, tombs, or sarcophagi, and ugly shaped figures cut out of stone thousands of years ago, and dug up in the island of Cyprus. There is where the Cyprian bees come from. Which will benefit the country most, the bees or the old stones?

There are many pictures in the museum, but I'll tell of only one which has world-wide reputation,—Raphael's Madonna. It was sold in 1878 for twenty thousand pounds ($100,000), and belongs to an Englishman, who loaned it to the museum. I can't describe this picture, children, for my pen is not equal to it; and as I sat and looked at it I did not know which to admire the more — the picture or its generous owner. If its owner were selfish, he would have kept it at home shut up in a picture-gallery, instead of risking it on an ocean voyage, to be brought here to be viewed by the American people.

When I left the museum I heard, "Aunt Lucinda, don't you want to see the Obelisk? We'll go under that bridge, and up on that mound so we can view it better." And here was Cleopatra's Needle! What queer fingers she must have had, to use such a needle! and I could not see a speck of an eye. Only think! Moses saw the obelisk, and it has changed but little since his day; the hieroglyphics are slightly worn on a part of it, by the drifting sands of the desert.

The Park has many things to amuse and entertain children. There is a playground with swings, and merry-go-rounds, and a dairy near, where healthful food can be purchased. In another part, burros and ponies can be hired for a ride, and on the Mall are miniature barouches, with a span of goats to draw them. These goats have harness like horses, only they have no bits in their mouths. These little carriages had two seats, and four could ride at one time. Oh how the little boys wanted to drive themselves, instead of having a boy in livery to do it!

In one part of the Park is a flock of sheep, attended by a shepherd dog. There is a pond with row-boats upon it, which can be hired; also a base-ball ground. There is a menagerie where many wild animals are kept; and many other interesting things which I can not at present tell you about.

New York, Sept. 8, 1883. **MRS. L. HARRISON.**

Now, Mrs. H., you may be right in your statement, that Moses saw Cleopatra's Needle, but I should very much like to know how you know it. While reading your article, my mind ran back to all I ever knew of Moses, which perhaps isn't very much, and also to all I knew of contemporary history, which is surely very little, but I could not in any way make the connection. Probably you are right, and I should view the obelisk with even greater wonder and reverence if it is really so.—Children, we can see flocks of sheep, and shepherd dogs, without going to Central Park, can't we? and bees and bee-hives too? Mrs. H., do they not have any bees there? You told us about flowers, but you did not say you saw any bees around them.

HOW DID IT HAPPEN?

SOME QUESTIONS FROM A BEGINNER.

I HAD a swarm issue out of a hive that had already swarmed three times. It getting late in the season, and weakening the colony, I put them back and clipped one wing of the queen. In a day or so, out they came again. On examination we found two queens in the swarm — one black and one Italian. The stand they came from being a hybrid, we killed the black one; and in catching the other we caused a bee to sting and kill her. We put them back, and in a few days out they came again, but did not more than half cluster till they all went back, and seemed satisfied.

Now, what became of the clipped queen? and why did two queens — a black and an Italian, come out together? and why two different kinds of queens in one hive?

My bees have not done much this season, it being wet and cool part of the time, and part too dry, and we had a frost in the latter part of May which killed all the bloom mostly. There is an abundance of wild and tame flowers now, and my bees are booming on them and buckwheat. How will it answer, should they store any more than will keep them after the flow of honey is over, to extract over what I think will winter them? My bees have never noticed the Russian sunflower, and have only commenced to work on spider plant the last few days, notwithstanding there were great drops of honey in it. I send you a sample of plant that grows from 6 to 7 feet tall that is just bending with bees from morning till night. It has been in bloom for nearly two months. I want to know if you have a name for it. My Simpson honey-plant did no good.

HONEY FROM THE OAK.

I will say, that bees are swarming on black-oak timber, working on a kind of gum, I think, that oozes out of the leaves.

SWARMING WITHOUT CLUSTERING, AND THE SWARMING MANIA.

I had a large swarm come out and cluster. I hived them, and next day, about 9 o'clock, they came out, and we settled them; hived them and put them in another place. In an hour, out they came, and we watered them; but, go they seemed determined to. We fired off a gun among them, and finally succeeded in settling them. We put them back, and my wife gave them some syrup; but they still seemed uneasy, so I put in a good-sized piece of comb I had just taken out of a hive with some honey and unsealed brood, but that did not seem to satisfy them; and the next day, out they came again. We rallied them round and round for half an hour or more, and finally back they came, and went into the hive, and seemed to be contented, and went to work. I think the queen, perhaps, was on the comb I had put in with a few remaining bees; and when they found she had not come out, they returned, and were willing to stay. In about four weeks they sent out a large swarm, and we hived them. After dinner my wife went to see a sick woman, and I was busy in the yard, and the children failed to watch them closely, so the first we knew they were out, and gone to parts unknown. Now, was it not the same queen, and a portion of the bees of the swarm that we had so much trouble to keep? My impression is that it was, and they had not forgotten their first determination to leave. My experience is, that bees sometimes pick out a tree to go to, and, under such circumstances, it is almost impossible to keep them. CHAS. L. GOUGH.

Rock Spring, Mo., Sept. 6, 1883.

Friend G., the queen you clipped was a virgin, as are all queens from after-swarms; and when you clipped her wing you spoiled her just about as effectually as if you had clipped her head off. She got lost in the grass, probably, and then the bees waited until the other two hatched, which you speak of. I think both were Italian queens, but one was accidentally black. We often find dark queens and light from the same lot of cells. This matter is so much discussed that we keep a black queen in our apiary all the while, producing nice yellow bees. —By all means, extract what your bees store more than they need, but be sure you do not starve them. —This matter of honey from the oak is now reported from almost all localities, and I should like very much to meet with a case of the kind. One of our office boys says he saw bees literally swarming on an oak-tree a year ago, within only two or three miles of where I am writing.—I think bees that have had the swarming mania would be quite likely to have it again, and I think you are right in saying it was the uneasy and discontented bees that started up the swarming mania again in that hive.—I do not quite understand you, friend G., about your Simpson honey-plant. The plant you send us, which you say is bending with bees, is the Simpson honey-plant, and nothing else.

"Remindery,"

Or Department for duties to be attended to this month.

NOW is the time to prepare the bees for winter, with most of us. The directions have been so fully gone over year after year that it is hardly worth while to repeat them. Quite a number of friends have been raising queens for sale, as well as for honey, and it is well known that our queen-rearing hives, or nuclei, are more difficult to winter. Neighbor Rice was just in, and I asked him what he should do with his. He said he should raise queens as long as he could, and then double up and winter the bees " as long as he could." The trouble seems to be, we have too many old bees to go into winter quarters. If we double them so as to make powerful colonies, there are so many of an age that they will die off nearly at the same time, and then the colony dwindles. Having some brood in all the nuclei before they are united, and then having a good queen to fill combs well when they are united, would probably be at least a partial remedy. Then feed with sugar stores until all the combs are filled well around the brood-nest, and the young bees will probably winter well, if the winter is a mild one. If it is very cold, you will likely have losses. Mr. Rice winters in the cellar, and the cellar would probably be an advantage for such, in the majority of winters, if one has a good one.

Reports Encouraging.

MY bees have done well this season. I have taken 2600 lbs. of honey—1600 lbs. in 1-lb. sections, and 1000 extracted. I have taken 114 sections from several of my best colonies, besides extracting from 6 to 9 gallons from the same colonies. Is that not good enough? I have opened the eyes of some of my old-fogy neighbors this season, who still use the old box hives, and think they have done wonders when they get a box of honey that will weigh 25 or 30 lbs , from one hive. I have taken over 200 lbs. this season from several of my good colonies. When I talk of getting 300 lbs. from a colony, they hardly believe it; but I can show the honey. W. H. CULP.

West Jefferson, O., Aug. 13, 1883.

I have a swarm of bees that was hived on the 22d day of last May, and since then they have put in boxes 210 lbs., besides filling brood-frames, making nearly 300 lbs. of honey, stored by this young swarm the present season. When you can make a better record out West, I should be pleased to hear from you. FRANKLIN TREAT.

Centreville, R. I., Aug. 20, 1883.

OUR FRIEND DR. J. E. LAY; THE SEASON IN TEXAS, AND CYPRIANS BY THIS TIME.

This has been the dryest year in 25. But little surplus honey; a great many bees died of starvation in this vicinity; ours are in splendid condition. All we ask is rain, and we shall have honey yet. We have watched the different races closely. We have Italians, hybrids, and Cyprians. The Cyprians are ahead of all, and we consider this a test year. Bees are now gathering from live-oak balls. J. E. LAY.

Hallettsville, Lavaca Co., Texas, Aug. 16, 1883.

CHAFF HIVES.

I purchased a chaff hive of Mr. Samuel Calland, from which I have taken 115 lbs. of good choice comb honey, and I think they have 20 lbs. more in the upper story, and I may get 30 lbs. They are rich in the brood-chamber. I think the comb fdn. the best thing ever invented to encourage the bees, and to realize the greatest profit out of them. I shall not hereafter be without it, as I realize a great advantage in using it. S. S. LEACH.

Quincy, O., Aug. 13, 1883.

I am a poor man, and bought one stand of bees the first of May. I now have 3 stands doing well, and 2 swarms ran off. JOS. MCFARLAND.

Goldsmith, Ind., Aug. 16, 1883.

Friend M., I do not know but this is out of place in Reports Encouraging, but I guess it isn't, for the bees did their part if you did yours. If you continue letting two swarms out of four go off every year, I am afraid you will always be a poor man. If we understand you, you had four swarms from the one you started with in the spring; from which, I should think, your locality must be a good one, and we must expect next year you won't let any go away at all.

R. E. FROM QUEBEC.

About the 15th of April, while there was yet much snow on the ground, I managed to get to the hives, and, to my joy, I heard a joyful buzz. On examining I found one stock dead, the remaining 3 alive and strong. As the sun disappeared, the bees came out stronger. I unpacked them and put all in order, and on the — of July I had my first natural swarm. I increased to 7; sold the stock that wintered in cellar in box hive, drummed out the Quinby, and settled down to the Langstroth hive. I have taken nearly 100 lbs. of section and 250 lbs. extracted honey. Had I had an extractor at the commencement, and bees all in Langstroth hives, I should probably have exceeded 500 lbs. W. TRICKER.

St. Foy's Road, Quebec, Can., Sept. 5, 1883.

Notes and Queries.

TAKING AWAY HONEY, AND GIVING THEM GRANULATED SUGAR FOR WINTER STORES.

I WANT to ask you a question. I thought of taking the larger part of the honey from the brood-department and feeding granulated sugar for winter stores, for I can get nearly one-half more for extracted honey than I would have to pay for sugar. Will they winter as well, or not?

Millersburg, O. C. F. UHL.

[As a rule, friend U., I think there is no question but that stores of granulated sugar are even safer than natural stores. Of course, we would not recommend taking out parts sealed late in the fall, and giving them syrup that they would not have time to seal over. If you do it at once, I think you are safe in taking away the honey, and feeding sugar.]

What should a two-year-old empty comb be worth in a Langstroth frame, without tin corners?

[In the price list we have rated empty combs at 25 cents each. Those on wire combs, 30 cents each. This is for metal-corner frames. I should rate all-wood frames at least 5 cents less. Of course, these combs are built out on foundation. Frames of natural comb are rated from 10 to 15 cents each.]

How old should combs be, to be discarded?

[I think I should use combs ten or fifteen years at least, before thinking of melting them up and using new ones.]

About what time should bees be laid away for winter?

[If you mean by the term "laid away," the time bees should be put into the cellar, it depends on the locality and the opinion of the bee-keeper. We used to put our bees into the cellar or bee-house about the middle of November.]

If you should make a hive 12 ft. long, and fill it with bees, with wire-cloth partition, would it not produce more of an equilibrium through the hives than if each swarm were in a separate hive, and retain the same in colder weather?

[The plan of a long hive is an old idea, and would seem reasonable; but it has so many times been tried and discarded, I am inclined to think it is not very satisfactory, as a general thing.]

Do you recommend empty fdn. to put in hive in winter, in the place of old combs, for bees to lounge on, if comb is not to be found?

Do you consider it necessary to use empty combs, for wintering purposes? If so, what number to a middling size swarm?

[To be sure, we want combs for wintering; but I believe it is generally thought better to have *filled* ones than empty. In regard to the number, it depends upon the size of the colony. Three combs might do, and then, again, a strong colony might need the whole ten.]

What is your rule for making such candy as you put in your queen-cages?

Would not that candy run in a wired frame be preferable to syrup to feed for winter and spring, and less liable to attract robbers, and less apt to sour? I made some candy last spring, and ran it in a frame. It was so hard that bees were loth to touch it. That which you send in your queen-cages is much more pliable. I should be pleased to know its proportion.

[The recipe for the candy in queen-cages is given in our price list. It is simply the best common pulverized sugar, powdered, and kneaded up into a dough with honey. The candy we use in queen-cages would not be apt to stand in a wired frame. Little balls, say the size of a biscuit, placed upon the top of the frames, I should say, would be the better way.]

Would it not be a good plan to let one of Jones's queen-traps remain at the entrance for one or two weeks, after introducing a queen?

[Your plan might prevent the queen from escaping, but I do not believe they very often go out of the hive after being introduced.]

How many combs of honey, 10x14, would you recommend to winter a fair-sized swarm?

[I would recommend about 8 combs, 10x14, for a fair-sized swarm.]

If there should not be more than one pound of bees in a hive, would you recommend uniting for winter?

[I would not attempt to winter a single pound of bees.]

What would be the least weight of bees you would recommend to lay away for winter?

[Better have at least three or four pounds.]

Syracuse, N. Y. A B C Scholar.

THE GOLDEN BEE-HIVE.

Is there such a hive as the "Golden," and is there a patent on it? There is a man selling such a hive here. His name is Pickerel.

Litchfield, Mich. J. D. Kennelsbrook.

[Friend K., we have published complaints of the Golden bee-hive men a good many times in our back volumes. If the hive is not a swindle, it is pretty near it, and you and everybody else will do better to let it alone. We can only reiterate, that the successful honey-raisers to-day do not use any patent hive of any kind. If any man talks patent to you, set him down as either bad or ignorant; and in either case do not have any thing to do with him.]

EXTRACTING FROM THE BROOD-NEST.

I am old in years, but young in bees. I bought 2 colonies last spring; increased to four; have taken out 170 lbs. of honey, and season just fairly opened. I have put one-pound boxes on the top of one hive; should I extract below? There does not appear to be room enough for the queen, as all the cells are full of honey. Should I extract before combs are capped over? James Ackeman.

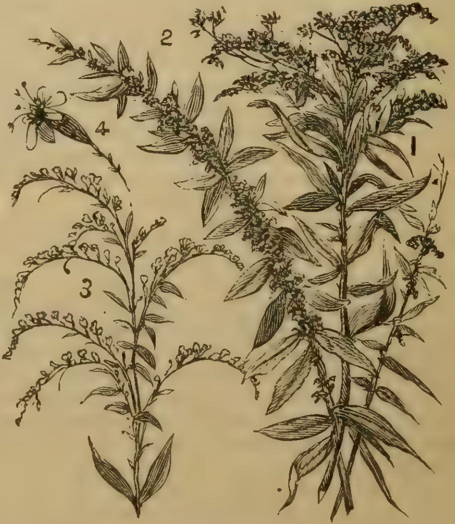
Pella, Colo., Aug. 13, 1883.

[There are different opinions in regard to this matter, friend A.; and as localities also differ very widely, perhaps it is difficult to give a general answer. In our locality, I should by all means say, do not extract. If you get the bees to working all in the sections, they will take the honey out of the way of the queen as fast as she needs it; and hybrids will sometimes take so much of their honey from them that they will not have enough remaining for winter stores.]

GOLDENROD.

THE GREAT FALL HONEY-PLANT.

As this is the season for goldenrod, I thought it might be well to direct attention to it. It is now in the height of full bloom with us; but I am sorry to say, that I have never seen goldenrod honey in our locality. Further north, by the lake-shore, where the soil is sandy, the bees get so much honey from it that they fill their hives, and the honey looks almost as yellow and golden as the flowers themselves. I have often wondered why it is that no one has ever thought of cultivating the goldenrod as an ornamental plant for our yards and flower-gardens. Again and again have I stopped in wonder and astonishment when I passed by clumps of these beautiful masses of gold, dotted here and there with beautifully marked Italians. I wonder if any one admires them as much as I do. Below we give you a picture of three of the common varieties.



GOLDENROD.

One thing that adds to the beauty of these flowers is, the different varieties are always found side by side. You examine the delicate pencil-work and coloring of the flowers of one stalk, and then look at the next, which is just enough different to give added charms, and so on with the other ones; and may be, if you examine closely, you will find that there are many different ones in the same patch. Several years ago I found one quite late in October, away back in the fields, and it was so literally covered with bees that I had a root of it put in our flower-garden; but it never did well. Although we gave it the best ground and most careful attention, it seemed to prefer its tangled fence-corner, where I first found it. It is No. 1 in the cut above. Our artist has tried to show you one of the little flowrets.

THE WHITESIDE APIARY,

BELONGING TO W. H. SHIRLEY, GLENWOOD, MICH. ALSO A VIEW OF A DISCARDED HOUSE APIARY IN THE DISTANCE.

FRIEND ROOT:—Often, when looking over your A B C, I wondered how my own apiary would look in a picture. Well, an opportunity came June 19, 1883; and by this mail I send you one. The picture shows about 4-5 of the number of hives. The little building in the center of apiary is where we take hives in to manipulate them in times of robbing, etc.; we also use it to get bees out of surplus honey, in the fall.

The longer building is the house apiary which Mr. Heddon built for bees five years ago. We kept bees in it two years, and gave it up as a bad job. I use it for a supply and work shop, extracting honey, etc.

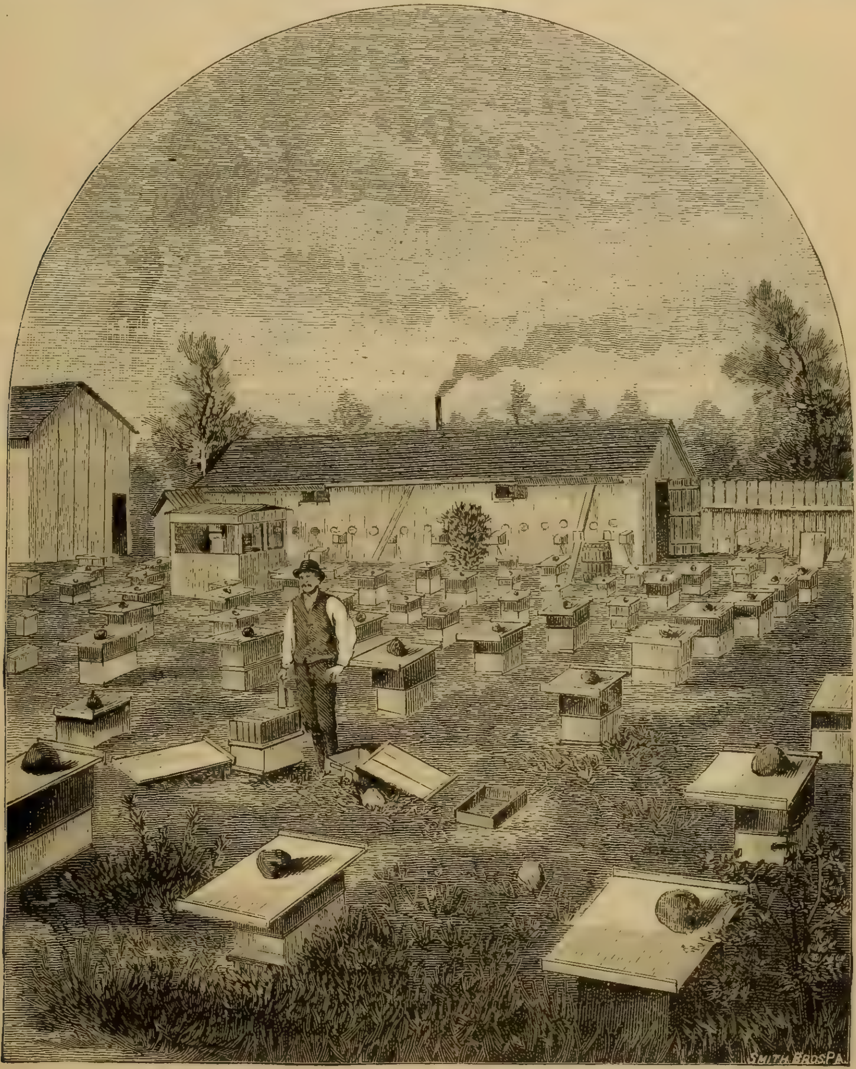
The person shown in the foreground is your humble servant.

Bees are doing nicely here on white clover. Our prospects are good for a fair yield of honey.

Excuse my intruding upon you in this busy time with pictures, etc. W. H. SHIRLEY.

Glenwood, Mich., June 26, 1883.

Friend S., we are the more glad to see the picture of your house apiary, because it shows us also the old house apiary that friend Heddon wrote us about some years ago. Unless I am mistaken, house apiaries are pretty much discarded, the land over. Although great numbers of them were built, for some reason perhaps not easy to explain, no one seems to like them. It looks a little funny to see a big rock on top of your hive-covers, to keep them from blowing off. I



APIARY OF W. H. SHIRLEY, GLENWOOD, MICH.

suppose those broad covers are for shade. It seems to me I would much rather have the grapevines that we use. I should get tired of moving those stones every time I wished to open the hives. You may think, however, it is less trouble to move the stones than to trim the vines. But our grapevines usually pay for the training. We are glad to get a view of your pleasant place of work, and we hope you may enjoy it and make it profitable.

PAUL PRICE.

ANOTHER VERSION OF VIRGIL, ETC.

MANY thanks for the cards. Paul has distributed them among the children of the neighborhood, and I hope they will do much good. I am sorry to say we have no Sunday-school, nor do we live near a church; but mamma teaches the boys at home, out of the Bible and other good books.

We were delighted to hear of that wonderful baby, and pray that he may grow up to be as good and useful a man as his father. Peter is *not* a very pretty name, but a very solid one. Paul sends in the great apostle's name, and his own. We like it very much.

It was rather wonderful to him to see his name in print, and your kind words were very cheering to him. He is glad to have you for his friend, and hopes at some future time to meet you face to face among the bees. He promises to write the next letter, perhaps after wintering, and tell you all about his bees. They have not made as much honey as we hoped they would at our last writing; but the goldenrod and buckwheat are now in bloom, and the promise is fine for a splendid fall crop. The colonies are strong, and full to overflowing; have commenced swarming, to prevent which, Paul looked them over, clipped the queens' wings, and removed queen-cells, and thinks he will have to divide them. He has a nucleus, and has sold two dollar queens. He is very hopeful of the coming year's work, and is complete master of his apiary, thanks to A B C, which he never could have gotten along without.

We have watched for and read with great pleasure the "inimitable" Hasty's unfolding of Virgil. It is a beautiful thought — culling bees from leaves and sweet herbs! Paul's father was professor of the languages and English literature for many years in our State University, after which he lost his sight entirely, then became a minister of the Christian Church, and labored in the service of the Lord some years before his death, twelve years ago. A purer man, and more devoted Christian, would be hard to find. He had a fine library of choice books; and although Paul has never read a great deal himself, he has considerable knowledge of classical lore, gathered from these, through mamma's reading. I read to him some time since the whole of Virgil's treatise on bees, which interested him greatly, although he is too practical to indorse the entire theory of generating bees from the blood of bulls. But then, he wonders where the bees came from that Samson found in the carcass. Virgil writes:

"But if the whole stock should suddenly fail any one, and he should have no means to recover a new breed, it is time both to unfold the memorable invention of the Arcadian master, and how the tainted gore of bullocks slain has often produced bees. I will disclose the whole tradition, tracing it from its source. For where the happy nation of Pellæan Canopus inhabit the banks of Nile, floating (the plains) with his overflowing river, and sail around their fields in painted gondolas; and where the river, that rolls down as far as from the swarthy Indians, presses on the borders of quivered Persia, and fertiles verdant Egypt with black silt, and pouring along divides itself into seven mouths, all the country *grounds* infallible relief on this art. First, a space of ground of small dimensions, and contracted for this purpose, is chosen. This they strengthen with the tiling of a narrow roof and confined walls; and add four windows of slanting light in the direction of the four winds. Then a bullock, just binding the horns in his forehead, two years old, is sought out: while he struggles exceedingly they close up his nostrils, and the breath of his mouth; and when they have beaten him to death, his battered entrails are crushed within the hide that remains entire. When dead, they leave him pent up, and lay under his sides fragments of boughs, — thyme, and fresh cassia. This is done when first the zephyrs stir the waves, before the meadows blush with new colors, before the chattering swallow suspends her nest upon the rafters. Meanwhile the juices, warmed in the tender veins, ferment; and animals, wonderful to behold, first short of their feet, and in a little while buzzing with wings, swarm together, and more and more take the thin air, till they burst away like a shower poured down from summer clouds; or like an arrow from the whizzing strings, when the swift Parthians first begin to fight."

Paul has found that the black bees are *not* the best workers, although mamma thought they were. The honey made by them, however, was the finest. It might have been accidental, but it certainly was the most delicately flavored.

After having thus fully introduced Paul and his bees, I bid you good-by, with many thanks for kind attention. L. B. Roote.

Coffman, Mo., Aug. 25, 1883.

A POOR ORPHAN-BOY.

A WHOLESOME LESSON FOR THE JUVENILES.

DEAR CHILDREN:—Do you know a poor little orphan boy or girl? Did you ever think how sad are the thoughts of a poor little boy or girl being left without papa, or without mamma?

Well, I will tell you of a little boy I knew many years ago. I can recollect when he was three years old, a bright-eyed little fellow. His hair was as black as a raven; his father was *gone;* but he was left, thank God, in the care of a good Christian mother, though almost penniless; no home that she could call her own, no one to provide for a living for her and her little boy. And I will tell you what I have seen. I have seen that good mother following the plow in the field, plowing corn day after day, trying to make bread to keep herself and little boy from starving. I have also seen her using the great sledge-hammer in the blacksmith shop, many a day, all day long, striking the redhot iron, and making the sparks fly. And how much money do you think she would get at night for her day's work? Why, only twenty-five cents! Don't you think that was very little for striking all day in a blacksmith shop? But time rolled on, and the little orphan-boy grew up to be large enough to take his poor mother's place at the forge in the shop, which he did cheerfully. He has taken, as any *good* boy would, the hardships off his mother's shoulders, and borne them himself; and, by the help of the great Father, they managed to keep food and raiment, and also acquired a good name that gave them the respect of the best of society. He has often told how his dear mamma would read the Bible to him, and tell him the story of the cross, and taught him to keep holy the Sabbath-day, and how ugly it is to use bad language, and what a degrading habit it is to use tobacco, and how little must people think of a boy who plays cards, or is caught visiting saloons, or in bad company of any kind.

Children, does your mamma teach you the same lessons? Oh! I know she does. This is not all. When Sunday morning came, after a hard week's work, by nine o'clock he was off to Sunday-school with his Bible in his hand, with a lot of questions to propound to his teacher. He finally became teacher of the Bible-class, and after awhile superintendent of the school. This, you see, is the outgrowth of a good mother's teachings. That orphan-boy is now a grown-up man, and you ought to hear him express his love for his good mother (and she is still living too), and ask God to abundantly bless her in her old days.

And that is not all. That poor orphan-boy has married, and has three juveniles at his house, and the two oldest are both going to Sunday-school every Sunday. And what do you think he is doing now? Well, I will tell you. He is keeping bees, though his bees did not do much this season; he got only about 20 lbs. of honey to the colony, spring count. He now has 35 colonies, and says that he is going to make a specialty of queen-rearing next year. The name he has given his apiary is the "Queen Apiary."

Hoping, dear juveniles, that none of you are orphans, and that you will "obey your parents in the Lord, for this is right," I bid you good-by, by saying that the author of this article is the poor orphan-boy,— T. J. HEAD, age 31

Sherman, Texas, Aug. 24, 1883.

WORKING, AND MAKING MONEY.

ONE OF THE JUVENILES TAKES ME TO TASK.

I THINK from what you said in reply to my letter in July JUVENILE, that you don't want to hear about any thing but working, and making money; so I am going to try to please you in this letter. Ever since I can remember, we have had to pick up hickory-nuts to sell. Two years ago, when I was 9 years old, I gathered 4 bushels, all myself. I sold them for $1.00 a bushel. I got very tired at it, and my back ached awfully; and when mamma used to sell strawberries I had to help pick them until I would be nearly tired out. Last year, when we sold blackberries, I had to pick three gallons every other day, for three weeks. It was in August, and the sun was very hot, and the briers stuck me, and the gnats flew in my eyes and nose, and the sweat dripped off my nose and chin. Now I shell the beans for dinner, peel the potatoes, wash the supper-dishes, and set the table ready for breakfast. I fill the milk-trough, and I have to pump 300 licks to fill it.

I help churn, and I can wash the butter, and salt it all myself; and mamma says my butter tastes better than any other. Last week, when Mamie Marshall was here, we did three churnings, and mamma paid us 5 cts. apiece for each churning. I gather the cucumber pickles. The first time I gathered them I "scalped" them; but I know how to do it now. Just the *stem* must be cut, and nothing else. I help wash and iron, and I tend Harry a great deal. I guess if you lived with my ma you would get so tired of work that you would never want to hear of it again. It is work, work, work, early and late. My sister Minnie keeps the house clean, all but the kitchen and cellar. Aunt Sarah keeps the kitchen clean, and mamma attends to the cellar. We all have our work to do; and if any of us get sick, or go away visiting, it throws the whole machinery out of joint. Give my love to Blue Eyes. I have blue eyes too.

Won't you please send me some of those little envelopes on your 5-cent counter, for this letter, instead of sending me a book?

I forgot to tell you about the tag-locks. When we sheared sheep, Irving and I picked up the tag-locks and washed them, and we sold them for 25 cents a pound. Mine came to 37 cents.

If I were you I would name my baby *Glenn*, for Glenn can not be nicknamed. I think Peter sounds as if you were making fun of him. I know a little boy named Glenn Hughes; he is a good little boy, and is good-looking. JESSIE CHADDOCK.

Vermont, Ill., Sept. 1, 1883.

Well, now, Jessie, that is a real good letter. If you were trying to please me, I think you have succeeded pretty well. A good many years ago there used to be a machine, or a toy, rather, called planchette. It was about the size of a flatiron, and it had three legs to it. Two of the legs had wheels on them, and the other had just a pencil. About that time there was quite an excitement about this wonderful machine, which they said would read thoughts if some one would just put his fingers on top of it. Of course, I bought one and carried it into a room with a lot of young people. They placed their fingers on it, placed it on a piece of paper, and, of course, it began to write, and we began to ask questions. It was when I was getting the bee-fever; and as everybody knew that, I asked the machine to please write what subject was constantly uppermost in my mind, and also what I was principally devoted to. I supposed the machine would, of course, tell us, and truthfully spell out b-e-e-s. Well, do you think it did? Not a bit of it. The contrary and mischievous little institution just went to work and wrote out — what do you suppose it was?— why, it wrote "g-i-r-l-s." I need hardly tell you that it was a mischievous, bright-eyed, rosy-cheeked girl who had her fingers on the machine. We accused her of cheating; but she declared the machine did it itself. Well, my little friends, here I am, almost an old man, bald-headed and gray-headed; and here I stand before you, accused of being devoted to—what?—"Working, and making money." But do you not think it is a little too bad, now, Jessie?—Even if you do tell about some of your trials and hardships, I begin to think you live in a well-regulated household; and I believe, too, you have a most excellent mother to preside over it. Yes, I send you the envelopes gladly; and if any of the little girls would rather have envelopes than books, they can have them postpaid for every *good* little letter they write.

AN A B C SCHOLAR'S STORY.

AND SOME KIND WORDS THROWN IN ALONG THEREWITH.

AFTER respects to yourself, Blue Eyes, and those thousands of little workerss of yours, I ask you to accept my thanks for GLEANINGS; the foundation all came to hand nicely. In Feb., 1882, I concluded I should love to handle bees; and, being ignorant of the manipulations, I sent to you for the A B C book. It came, and I read and re-read. In 30 days I concluded I was fully "fledged," and offered ten dollars for a good colony. I could not get one; bees are not plentiful here. Eventually I found a man with two starved colonies. I took them on halves. I fed sugar and unbolted flour. Soon brood began increasing. In May I made one "divide," and had one swarm; June, 2 swarms; July, made another divide; in Aug., had another swarm, 7 colonies to begin winter. I got stung every day. Wife, reasoning the case about those pesky bees, said, "I thought if A. I. Root or any other man said he divided, extracted, etc., without veil, coat, and gloves on, went"—well, you may guess what.

Spring came, and five colonies only left; but, having launched my bark on the river that "flows with milk and honey," I must extract some of the sweets of life as I float down its placid current. I ordered an extractor, 100 frames, 500 one-pound boxes, and 50 wide frames. I made 16 hives, Simplicity principally. Have extracted 336 lbs., and taken off 85 lbs. comb honey to date. I shall take off 100 lbs. more. I have increased to 17, and lost 3 that left for parts unknown; and—

"If anybody will them bind,
And bring safely to the 'Squire's,
Twenty dollars they shall find,
And more if they require."

I quit extracting in time for bees to fill frames with clover honey for winter use. Clover season closed 15 days ago; not much buckwheat, and but little else for bees here this fall. Bees did well till clover closed. Hundreds of colonies in this county now, and for a while the market was glutted; but now it is better. Market price, 15c for extracted; 15 to 25 for comb. I put my extracted in ½-lb. tumblers, and quart glass, and sell at 17 to 20c; my comb in 1-lb. boxes at 25c, and calls for more than I can supply. Please tell our brothers that neatness of the package we put on the market wins the day. As I am a beginner, and this my first letter to you, I must close, or you will think "talk is too cheap."

Selden, O., Aug. 14, 1883. L. B. PARK.

AN ENTHUSIASTIC A B C SCHOLAR.

LET US CATCH SOME OF HIS ENTHUSIASM.

NOW, Mr. Root, I will give you just a little description of how I have succeeded with my new undertaking. I feel that I owe you a debt of gratitude which it will be very hard for me to pay. Your A B C book is certainly a perfect guide for the beginner; and if a person of any judgment whatever studies it carefully, he certainly will make a success of his undertaking; and, with a little of the practical part of bee-keeping, will soon be taught to love the dear little fellows. I at once began to manufacture chaff hives for myself after I received your A B C book; and after a long search, and a number of tiresome walks, I succeeded in finding a man who was willing to sell me a colony of black bees, for which I paid $5.00; and by another diligent search I found two persons who were willing to trade me a swarm for a hive. So I set myself at work; and by the first of July I had three good colonies, and I then bought an Italian nucleus, and that is the extent of my undertaking thus far. As soon as I arrived home with my old box hive and its inhabitants, I set myself at work and followed your instructions in relation to transferring, and I made a grand success from the first; and I find, by following your teachings, it is a very easy task to perform; but as soon as I undertook to transfer my second colony I was beset by robbers. But I made short work of them by keeping every bit of honey out of the way under cover, and then there was no trouble. I have now stuff on hand, all sawed, for 25 chaff hives, and I am busily engaged in working it up, and getting ready for fall, as I expect to take from my neighbors enough bees to fill them, as they generally kill their bees in the fall and take out the honey; and, as you know it will be their best colonies that they will take up, I can get a good start; and if I make a success of wintering, I will come out in the spring ready for business.

I must say, for one of my friends, that he is a man of large experience in bee-keeping, and he has promised to come and put my bees up for winter quarters, and teach me the great secret of wintering without loss. He has kept his bees in chaff hives for two years, and I just wish you could see the inside of his hives at present, and see the bees and honey. He has 35 colonies, and by the first of August he had 2000 lbs. of surplus honey. He says he will put up my bees, and would not be afraid to insure them for the small sum of 10 cents. Last winter he did not have any loss; and there were so many bees in his hives by the first of May that there was scarcely any room for more, and you know that that is just what we would all like when spring comes, to have good strong thrifty colonies. He lives about 10 miles from me, and I go up occasionally to see him. It does me good to see his bees and honey.

My bees will give me a small surplus this season; but as it was very late when I commenced, I can not expect much honey. But I tell you, I have built them up strong, and have learned the art of hatching young bees, and how to keep the queen laying; and that is what we want — young bees crawling out of the combs every day. It is a pleasant sight to see them come out of the hive the first time, and crawl around.

I may be taking up too much valuable space in your journal; but one word more, and I will close. I must tell you about where I live. I live in the Rondout Valley, as it is called, and it is a splendid location for bees. Every month, from May until frost comes, blossoms abound abundantly; and I think, by skillful management and close attention to 25 colonies, that I shall have next fall a good report to make to you. ED. HARNDEN.

Kyserike, Ulster Co., N. Y., Aug., 1883.

Friend H., I felt a little troubled when I read that you were going to try to winter 25 colonies, and that the 25 are to be principally made up of bees that were to be brimstoned; but when you told me you had an experienced friend who would come over and help you, I felt a little better about it. You say, he says he will almost warrant them for

10 cents a colony. Tell him I will give him 50 cents a colony if he will warrant ours, and he may have all the granulated sugar to feed them he wishes, and he may also double them up as strong as he pleases. Now, then, may be there is a chance for him to make us a visit and make some money besides. If he does not take the offer up, it is open to any other bee-friend. If I could give the apiary my personal supervision, as I used to do, I should not be so much troubled about loss; but with our great business it is now impossible; and our boys who have been trained for the work are all going off to school. I am glad they are going off, for I would rather lose the bees than to have the boys lose an opportunity for getting an education. I feel very much pleased, friend H., to get such kind words as yours from my pupils; and when reading your letter I made up my mind that there would be no trouble at all about your succeeding, if your enthusiasm held out, and you followed the A B C book as you have been doing, and did every thing up well and thoroughly. Text-books are excellent helps, but they can never make up for want of energy and thoroughness. Perhaps I should mention to your bee-friend that we now have between 300 and 400 colonies; but I presume he would double them up to one-half that amount, or still smaller.

SOME PRACTICAL MATTERS FROM FRIEND POND.

HIVING BEES ON THE SABBATH.

I AM an advocate of a strict observance of the Sabbath; not in the letter only, but in the spirit. I hold it to be sinful to do aught that will cause offense to any one — that is, legitimate offense; still, I believe we must take care of those things that a wise and merciful God has given us, and not allow loss or injury to any property that he has allowed us to come in possession of. In regard to hiving bees on the Sabbath, had God intended we should not do so, he certainly would not have given them the swarming fever on that day. We, however, must make these matters questions of individual conscience. I feel it my duty to stay at home from church, and hive any swarms that issue on the Sabbath. Did I not do so, I should feel that I was not taking proper care of the possessions an all-wise Creator had bestowed upon me. I think the best creed to be observed in the matter is the one shown up by the slave down South, whose master on Saturday cut down a large quantity of grass, and on Sunday desired the slave to go out and take care of it. The slave remonstrated, on the ground that he was pious, and considered it wrong to work on the Sabbath. The master then said to him, "Doesn't the Bible teach you that, if an ox or an ass fall into a pit on the Sabbath, it is right to help it out?"

"Yes," the slave, "but it doesn't say nuffin' about diggin' a hole Saturday arternoon for the ox to tumble into."

If we take this view, and do all we can on Saturday by dividing, or something of the kind to prevent swarming on Sunday, or if we do the best we can any way, and a swarm does issue on the Sabbath, I think we should be blamed by our heavenly Father if we did not take such steps as were necessary to save it.

PREVENTING THE FASTENING OF FRAMES IN UPPER TO THOSE IN LOWER STORY.

As an experiment in a two-story hive, working both stories with regular brood-frames, I took a piece of enamel cloth, twice as large as the top of hive, folded it so as to leave the enamel on the outside of both sides, and placed it over the frames, leaving a space about 1½ inches wide the whole length of the hive, for the bees to crawl through. I then put on the upper story filled with brood-frames of fdn. The bees immediately occupied the upper story, and worked in it as readily as they did in other hives where they had no obstruction whatever between the frames. They filled the frames with honey at once; the queen did not go into the upper story at all, and I got a fine yield of extracted honey without any sticking of frames together at all. This was a single trial, but it worked so satisfactorily that I shall try it next season on a larger scale.

PREPARING BEES FOR SHIPMENT.

I have met with good success in moving bees in the hottest weather, when prepared as follows: I first securely fasten the frames so they can not move in any direction, and then nail a sheet of wire cloth over the bottom of the hive. For the top, I make a rim 1½ in. wide, similar to the rim of a Simplicity cover. Fasten it on top of the hive, and cover it with wire cloth. The bottom-board and cover, I fasten above and below the hive, with 8 strips of ½-inch stuff about 4 inches longer than the hive is deep, by nailing one of these strips to each corner of the hive, and nailing bottom and cover to the ends. By this means I give ample ventilation from below, and plenty of breathing-space above; at the same time, I secure the wire cloth from any possible chance of injury; and as but one package is made, a considerable saving in express charges is made also. While I do not consider the plan given by friend Carroll, on page 440, to be safe, owing to the lack of breathing-space above, I am satisfied that the plan I give is as safe as any that can be devised, when we wish to send the whole hive economically with the bees. I have shipped a large colony on ten frames, each containing three or more pounds of honey, 200 miles in July, in a Simplicity hive, with the loss of hardly a bee.

CLOSE-TOPPED SECTIONS.

I have become convinced that close-topped sections, or close tops to broad frames for sections, are a positive detriment, unless some convenient plan when they are used can be adopted for giving ventilation. My bees have no shade, except such as I can give them by some artificial means, and I find that the colonies storing comb honey would loaf outside the hive, while those that were storing in brood-frames in upper story kept busily about their work. Thinking lack of ventilation, and fear of melting down combs, was the cause of the loafing, I removed a brood-frame and spread the others out so they spaced evenly. In a few moments a decided change took place, and I then reduced the width of tops of brood-frames, and after that I had very little trouble of the kind. "One swallow does not make a summer," I know; but the hint was just as good as a kick to me; and hereafter I shall go in for open tops to frames and sections.

DO BEES REMOVE EGGS FROM ONE HIVE TO ANOTHER?

Since the arrival of Aug. GLEANINGS I put a frame of comb containing some brood and honey, and a few eggs, into the upper story of a strange hive. I cut a small hole through the covering mat, about 2 inches long and one inch wide; laid the frame on its side over this hole; propped it up about two inches high, and there let it remain two or three days. The bees clustered on both sides the comb, as if desirous of keeping the sealed brood warm. They removed but a small portion of the honey, but did remove every egg in the under side of the comb, leaving those in the upper untouched. As both colonies are Italian, I shall not be able to decide whether these eggs were deposited in cells below or not, but have good reasons to think they were. This experiment does not prove that bees will rob a strange hive of eggs, but does certainly show that their wonderful instinct teaches them to preserve all the worker force they can, and that they reasoned out the fact that they could better do so by taking the egg from the cold upper story into the warm brood chamber.

HUTCHINSON ON ALLEY'S NEW BOOK.

I read friend Hutchinson's *critique* on friend Alley's new book, and was amused at his statement (in substance) made after saying he had not given the method described a trial, that the manipulations detailed were so complicated, and caused so much labor and trouble that he would give up queen-rearing sooner than use them. Now, if friend H. had not given them a trial, how could he know any thing about them? Friend H., would it not have been more sensible for you to have given them a trial before setting the seal of condemnation on them? What say you? and, frankly, do you think that you, with your four or five years' experience only, are fully competent, without trying them, of passing in judgment upon the plans of one who, for twenty-five years, has made queen-rearing a matter of study and experiment? It is easy to condemn, but hardly fair to do so without evidence. Give any method, friend H., a fair trial; and if you don't view it favorably, give your reasons for an unfavorable criticism, and no one will find any fault; but to condemn a matter of manual manipulation without trying, is like condemning an accused without knowing the evidence against him. J. E. POND, JR.

North Attleboro, Mass., Sept. 1883.

When preparing our bees for shipment we do so in just the way you mention; and the Simplicity hive favors this by its construction. When making the pieces to go around the cover we sort out the poor strips and save them for frames for holding the wire cloth to put over the bees. You see, these strips bring the wire cloth about two inches above the tops of the frames; and where there is wire cloth over the bottom of the hive also, the bees can never suffer for lack of ventilation.— Bees do remove the eggs from the combs sometimes, but I have never been able to prove that they put them somewhere else in other combs. Some way I just got the idea that they ate them up only to get them out of the way.—I believe I agree with you, friend P., in all your points. I do not think that, as a rule, one should condemn any process who has not tried it; or, at least, he should not condemn it very vehemently. Our friend Hutchinson may have erred in the way you mention; but has not friend Alley erred in condemning lamp nurseries, while he says in almost the same sentence he never used one? I am asked to try a great many things before deciding against them; but it is often impossible. Notwithstanding I am compelled to decline even giving the hive or process a trial, I think I am justified in deciding against it. Your remarks in regard to open ventilation and open-top sections seem to show that there is to be so wide a difference in this matter of ventilation that it will remain, like many other points, for a long time unsettled.

NOTES OF TRAVEL AMONG THE BEE-FRIENDS OF MICHIGAN.

BY OUR PROSPECTIVE ASSISTANT EDITOR.

I HAVE just completed a part of my trip among bee-friends in Michigan. Starting from home on Monday night I arrived at Cleveland on the same evening, and from thence took the steamer for Detroit. Here, according to previous agreement, I met friend M. H. Hunt, a man full of enthusiasm, and one, too, who makes bees *pay*. Anxious to see all that could be seen, we at once took a car for Otto Kleinow's, at the other end of the city. Reaching there my eyes were first greeted with a large and elegant flower-garden — one of the finest I have ever seen. After viewing this a short time we went, in company with Mr. Kleinow, to his apiary, which appeared to be well cared for. One thing in particular attracted my attention, and that was some very large Simpson plants. They had attained a height far exceeding any thing I ever saw before, and I have seen some pretty large ones too. Well, after having had a pleasant talk, Mr. Hunt and myself went back through the city again. At various places he pointed to me where his honey was kept at retail. Finally I inquired how many of these places he kept supplied with his honey. He replied, that there were about *sixty*, and that he had already put upon the market about two tons of honey. He has about as much more to come off the hives, and at this rate will probably have to buy more to keep pace with the demand.

But, to return. After seeing the city we started for Mr. H.'s two apiaries. Stopping shortly at the first we went on to the second, at his home. Both apiaries are kept in splendid order, and the bees were housed in very pretty chaff hives of Mr. Hunt's own design and make. At the rear of the barn was the horse-power, a modification of which was given in GLEANINGS a short time ago. Up to this time Mr. Hunt has made all his hives with this, and he says it works well too.

Next morning I took the train for Lansing, and from thence started on foot for the Agricultural College Grounds, about 3½ miles from the city. Unfortunately, however, I learned too late that this was during vacation; but on making some further inquiries I soon found Mr. Hershiser, a student of Prof. Cook in apiculture. In company with Mr. H. I visited the College Apiary, where, under Prof. Cook, the boys are taught bee culture at its present stage of advancement, together with the use and management of apiarian implements. From here we went to the museum, then to a large spacious hot-house. The grounds and every thing in general were kept in splendid order, and I must say that it is one of the finest places I have ever visited.

Not having much time to spare I returned back to

Lansing, where I took the next train for Flint. On arriving here I was duly informed that Rogersville, Mr. Hutchinson's postoffice, was from 12 to 15 miles out, and that the train would not start till 4 P.M. I also had the satisfaction of knowing that there was no stage line to this point, and that a livery could be had for $3 00, when it cost only half that from Lansing to Flint. To wait all day in Flint when time was precious did not strike me favorably. Finding that a train would take me 4 miles of the distance, I took advantage of this, and walked the remainder. In due time I arrived at the "Banner Apiary," and found W. Z. Hutchinson at work in his shop. It did not take long to make his acquaintance, and we were soon engaged in matters pertaining to bee culture. The first thing that met my eye was that foot-power buzz-saw which he described in GLEANINGS a short time ago. Of course, Yankee like, I had to try it the first thing, and to my surprise it worked splendidly. With this he has made most of his hives and frames; and from the working of it I should judge it would do ordinary hive-work without much difficulty. In an adjoining room was his honey, which was put up in crates ready for sale. He, as well as Mr. Hunt, has a very fine lot of honey, and I understand they are to exhibit at the Detroit State Fair. They have both made great preparations; and from what has been seen already, I am of the opinion that it will be the finest display in this line that Detroit has ever had. Next Mr. Hutchinson showed me his lamp nursery, where he had a nice lot of cells. During the whole time I was there the nursery varied only one degree; and in that time, toward evening he had taken the lamp out about an hour to show me some things he wished me to see. After having had a very pleasant bee-talk with Mr. H. I took the morning train for the town of the Linswik sisters. Arriving there toward evening I soon made my way to "Our Clearing," situated in the midst of the forest. Located here was a very pretty frame house, at a place, too, where one would hardly expect any thing but a log-house. Although my arrival was entirely unexpected, I soon made myself known. Next morning we took a look through the apiary. Here were about 60 colonies of as fine and gentle Italian bees as I have seen. Although the season was somewhat backward in this locality, they had gathered quite a little honey. In this lot I saw some prize sections, which I think were the best I have seen while on my trip through Michigan. It seemed to me a little curious that these ladies could manage 60 full colonies; and yet they told me that no one else helped them, except to put the bees into winter quarters. This, then, demonstrates that women *can* handle bees, and make it pay too, though it is not all of them who are thus successful.

Manistee, Mich., Sept., 1883. E. R. ROOT.

You see, friends, Ernest and I talked the matter over, and we concluded that, with over 6000 subscribers, GLEANINGS ought to have a traveling correspondent, or a traveling editor, if you choose, and so I suggested that he start out and send in notes of travel, and I think he has done pretty well; don't you? Well, along with his notes of travel he sent in some kind words that he did not intend for print; but as the JUVENILE is privileged in the way of kind words, I think I will give it, after all. When we get our project started, we shall perhaps give notice where we expect to go, that we may be able to call on the friends who would be especially glad to see us. But for the present, Ernest must go back to school, and I shall have to shoulder the editorial and factory work until the boys complete their education. I say *boys*, for there are several of them who are going through college with an especial view of fitting themselves to assist in the management of the "Home of the Honey-bees." Here are the kind words. You see, they did not all come from Ernest himself.

Dear Father: — I have had a most splendid visit among the bee-friends. Everywhere I received the most cordial welcome, and that, too, from friends whom I have never seen. I never realized before what it was for you to have so many friends. Just as soon as I mentioned your name they knew me right away. Everywhere I stopped I have felt perfectly at home. The ideas that I have gathered since being away have been of great value to me. Inclosed you will find an account of my travels. I have not sent my notes along as soon as I had expected; but the fact is, I have been just as busy as a bee, and it has not been till I arrived at Aunt Sarah's that I have had time to write them up.

Your son,— ERNEST.

DEPARTMENT FOR THOSE WHO SAY GOODS WERE NOT THERE.

I RECEIVED your shipping-bill of goods on yesterday, and went for the goods to-day. The bill was all right as I ordered, but I could not find the circular saw, which I sent for. Every thing else is all right, so far as I can see. I suppose it was a mistake in packing the goods. I hope you will send it, and the cheapest way. CHAS. MATTHEWS.

Fredericksburg, Ohio, Aug. 18, 1883.

On receipt of the above we had the proper clerks hunt up the whole matter; and when they found it was the foreman of the packing-room who put up the goods, they wrote as follows:—

Friend M.: —Your goods were put up by our most careful clerk — one who rarely makes mistakes. He states that he put the saw in the last thing himself. We can not but think, friend M., that the saw must be in the pkg. We think, if you will again look carefully, you will find it.

After a few days we got the following:—

I have found the saw. I did not unpack the boards at the time I got the package. I found the rabbets, queen-cages, and cards all together, and I supposed the saw was forgotten.

Fredericksburg, O. CHAS. MATTHEWS.

Now, friends, this is a small matter, it is true; but we have to keep constantly two pretty good clerks hunting up correspondence, adjusting just such complaints as this. And a great many times it happens as above, just because the one who unpacked the goods was heedless. I admit, we have some carelessness here; but when the one who sent the goods, and the one who gets them are both careless, you see it makes a heavy bill of expense. Another thing: how can I very well ask a clerk to pay for his mistakes, with these cases in view? Perhaps if I keep this department constantly before you, it may help all to do better.

JUVENILE·DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

> " A chiel's amang ye, takin' notes;
> An' faith, he'll prent it."

DO you want to know about that baby again, my little friends? Well, he is big enough now so he can sit up in a clothes-basket, and Caddy and Connie have just been carrying him around the house by taking hold of the handles of the basket. Well, he enjoyed the fun amazingly, as long as they carried him about; but when they put him down he would grunt and scold, as I have told you. Well, Caddy came to her mother one day, and, said she, " Why, mother, just see what an ungrateful little fellow he is. We have carried him around until our hands ached until we could hardly stand it. And when we set him down he just grunted and scolded!"

What do you think about it, little friends; is his ingratitude so very unusual? No doubt your mothers or your older brothers and sisters have carried *you* about until their wrists ached, and backs too, perhaps. But instead of being thankful, you looked cross, and grumbled and complained. I wonder if you are looking happy and pleasant, and feel thankful for what has been done for you. How is it, my little friends, are you looking pleasant *now?* Suppose you take a look in the looking-glass, and then write me how that face looks that you see in there. And that reminds me, we have a great deal of fun in holding baby up before the looking-glass. I carried him up to the glass the other day; and when he saw me in the glass he laughed and began to "coo." That set me to laughing, and Maude came up. When he saw her he laughed and crowed more. Then came mamma, and he gave her a greeting, and the same with Blue Eyes. Then *his* great blue eyes opened wide in astonishment. He looked at the crowd in the glass, and then he looked at us, and his crowing and merriment all at once changed to astonishment and then to fright. How *could* it be, that there were *two* whole families? Even though his little life spans only a few brief weeks, he has learned some things by experience. He had found out what a loving little circle God had dropped him into, and he had learned to know his brother and sisters, and father and mother. But he had not yet had experience in looking-glasses, and he finally rolled his eyes in such a fright that we were obliged to take him away and pacify him.

Poor little Peter! With his baby sense he doubtless thought he had learned pretty much all there is in this world; and when he ran against this big problem of looking-glasses, he was frightened, because he could not solve it. Now, little friends, our baby's memory goes back perhaps not to exceed eight or ten weeks. You who can remember eight or ten years feel old and wise in comparison; and some of us who can look back and remember forty years, or even more than that, think we are *very* old and wise; but is it not likely that our span of life and experience is but as an infant's, compared with the great eternity yet before us?

Except ye be converted, and become as little children, ye shall not enter into the kingdom of heaven. —MATT. 18:3.

HOW JOSEPH GOT A SWARM OF BEES.

My pa has 23 swarms, and I have one. Last summer, one noon when pa ate dinner I watched the bees. He told me if a swarm came out they should be mine. Out came one! They alighted on a peach-tree right by a hive, so I got a swarm of bees.

Homer, Mich. **JOSEPH BENHAM.**

My pa has got 5 colonies of bees; he had 7, but two colonies died. Pa has an extractor of your make. He got it of Mr. Scovell. He is very much pleased with it, although he has not extracted very much with it yet. I go to Sunday-school every Sabbath at Sparta. **NELLIE GORDEN.**

St. Joseph, Mo., June 15, 1883.

HOW JAMES SPENT HIS FOURTH OF JULY.

My pa has 151 colonies. I help him very much; I have sat three or four hours at a time, wishing that a swarm would come out, for I do love to hive them. I stayed home almost all day the Fourth of July helping my pa. **JAMES T. LEFFINGWELL, age 13.**

Nonewac, Wis.

Pa had a swarm of bees to-day. The bees that were in the cave wintered the best. Our school is out now. We have taken off 3000 lbs. of honey. We have 124 swarms of bees. **EVA L. FARRINGTON.**

Strawberry Point, Ia., Aug. 1, 1883.

Can't you tell us a little more about that cave, Eva?

HONEY FROM COTTON.

I have three colonies of Italian bees in the Langstroth hive. I have been reading the JUVENILE and GLEANINGS for some time to give me knowledge about bees. My bees are in good order, and working on cotton-blooms, and I think on sunflower too. My brother has three colonies, and my sister has two colonies of bees. Pa helps us attend to them.

HOWARD GRANBERRY, age 13.

Austin, Texas, Aug. 4, 1883.

HARRY AND HIS FATHER.

Papa has 6 swarms of bees in chaff hives, and two in box hives. I should like to see your mill where you make bee-hives. I suppose you have a great many swarms of bees. Papa got five bee-hives from you. He and my brother have been making chaff hives. Papa has a little mill, and he turns it with horse-power. He says he likes to work with bees, and when he looks at them I like to be with him, so that I can see the bees and the honey.

New Town Mills, Pa. Harry B. Datterer.

HONEY FROM THE WAX-PLANT, AGAIN.

Pa has 40 colonies, and has taken, this season, 1800 lbs. of comb honey in one-pound boxes, and 800 lbs. extracted. He makes his own hives, and my brothers, Milton and Willet, and I help put the frames and sections together. One of our neighbors has a large wax-plant, and nice white honey comes from the blossoms, and drops on the floor. I have heard that the Italians were not as cross as the blacks; but ours are very much worse. Vernon W. Travis.

Lyons, Wal. Co., Wis.

Please don't tell any more such stories as the one about the bees taking *all* the cider away, because——. I think you had better call that rosy-posy, dimple-darling baby-boy "Peleg." It is almost like "Peter." I think you had better put his picture in the Juvenile. Bertha Hallett.

Galena, Ill., Aug. 22, 1883.

Why, Bertha, I should be glad to put the baby's picture in the Juvenile, but I can not find any engravers who can make good pictures of babies and little folks. If any engraver should see this paragraph, I wish he would send me a specimen of his work.

MAKING A CAPON DO DUTY FOR RAISING CHICKENS, SEE PAGE 419.

You are right about the purpose. It is so that the hen can go right to laying. The object of pulling off the feathers, and washing him with salt and water, is to make him smart, so that, when the little chickens are put under him, they soothe and stop the smarting, and make him cluck and like the chicks. If he doesn't cluck, he won't take the chickens. As soon as you hear him cluck you may be sure he has taken the chicks. In the morning, give them a little feed; and if he is a good capon he will call them just like a hen. J. P. Israel, Jr.

Point Loma Light-House, Cal., Aug. 18, 1883.

WHITE POLLEN FROM PLANTAIN; PROPOLIS FOR SEALING FRUIT-CANS.

This is to let you know that I like the book you sent me. It is the Giant-Killer. I didn't expect such a nice book. Mother says it is the best one of the kind she ever read. I thank you for it. Our bees gathered white pollen from plantain. Mother sealed up the cans of currants with propolis that we scraped off the sections. When our bees swarmed, mother was sick, and I helped father hive them. I like to work with the bees. Our two old colonies threw out seven swarms. We put the two last ones together, and one went in with another. That made five out of seven, so we have seven in all.

Ina Hunter, age 10

Kendallville, Ia., Aug., 1883.

HOW GAIL BUILT UP A LITTLE COLONY FROM A SWARM AS BIG AS YOUR FIST.

Since I wrote to you, God has given me another darling little brother to love. He is eight months old, and his name is Clyde Ellwood. He is pretty, and cunning as he can be. I think that Glee, Artie, Otto, are nice names for little boys. Perhaps you would like Jesse Dell, or Ray. Pa has 154 colonies of bees, and they are doing well for the season. I like to watch the busy bees as they gather their stores of honey. I found a cluster of bees about as big as my fist, on an apple-tree, on the first of July, and they are now on six frames.

Gail B. Crowfoot.

Bloomington, Mich., Aug. 23, 1883.

SOME POETRY ABOUT THE HONEY-BEE, BY A JUVENILE 13 YEARS OLD.

I am at present with D. E. Best, and read the Juvenile. I saw nice letters and poetry, so I thought I would compose a few verses. We used to have bees, but sold them to Mr. Best, who has 105 boxes, all in nice trim.

THE LITTLE FAIRIES.

I was in the apiary
Picking up a new section,
When something like a fairy
Stung, stung just to perfection.

Down I grabbed, but just too late;
Down I threw the little box;
I no longer now could wait;
Home I ran, just like a fox.

I scratched and scratched all the night,
But it swelled; it swelled the more,
And my leg it was a sight,
Greater, greater than before.

Children, can you tell the name
Of all these little fairies
(And they are not always tame)
Who live in the apiaries?

Frank Kinsey, age 13.

Bests, Pa., Aug. 20, 1883.

BEES ON LILACS, ETC.

A swarm of bees came off the 30th of June. They circled around a few minutes, and went in with another swarm that father had hived the day before. They didn't cluster at all, and we thought perhaps they had that hive already picked out to go into, as it had been standing about 20 feet from the hive they issued from, for some time.

I saw our bees working on the lilacs. They are black bees.

We wintered 4 colonies in the cellar. Three of them came out heavy with bees and honey. The other was a small late swarm. We fed it part of the winter. The bees looked bright and nice when they came out of the cellar; but we had a good deal of cold wet weather in the spring, and they kept dwindling away till they were all gone. One of the others became queenless. When we noticed it, mother put a frame of brood in with them, but they didn't raise a queen. Father put the first new swarm in with what was left of them.

Horsemint is in bloom; the bees are not working on it yet. There is no basswood nearer than three miles. A "cosset" lamb means a pet lamb.

Kendallville, Ia. Lovina Hunter, age 12.

BEES THAT CARRY FLOWERS.

On page 457, August Gleanings, friend Corbett speaks of wood-bees carrying leaves, which, of course, is nothing new. But, to the subject. As I was taking my usual round in the apiary to-day, I noticed one of my Syrian colonies carrying something in their mouths that looked rather strange. On going closer I caught some of them and took an observation of their loads and found them to be blossoms from the teasel, and they were not inclined to drop their freight either, as I had to wrest it from them by force. This can be proven, as one of my neighbors was with me at the time, and noticed the same. Now, Mr. Root, the query is, What was their object in carrying those flowers into their hives? A. S. Lindley.

Jordan, Ind., Aug. 7, 1883.

Why, friend Lindley, it must be that your bees have got some nice little vase set up somewhere on some brackets inside the hive, and they are carrying in the posies on purpose to have a bouquet to make their home kind o' cheerful like. How is it, children? Do you suppose that bees like to see flowers standing around in their hives, especially on rainy days, when they can not go out to gather honey? Who can tell us more about this matter?

FROM 10 TO 32, AND 600 LBS. OF HONEY.

My pa had 10 stands of bees in the spring, which have increased by natural swarming to 22. He had a great deal of trouble with them, it being the first year he ever kept bees. But he has subscribed for the bee journals, and thinks he can do better with them next year. Pa took out about 600 lbs. of honey, and sold some of it. I help pa swarm the bees in the summer time. This is my first letter to you.

Wyoming, Ill. CORA JARMAN, age 12.

Pa has 200 colonies of bees. He is a bee-keeper and honey-producer, and raises tons of honey. He winters his bees in the cellar, except a few which he has on their summer stands, unprotected, to experiment with. He has kept bees for about 30 years; but on the improved plan, for about 12 years. My brother helps pa with his bees, and takes GLEANINGS; and as the JUVENILE comes with it, I like to read it. MARY M. BULL, age 12.

Valparaiso, Ind.

WHAT AILED THE QUEENS?

My papa has 49 swarms of bees, and we have had lots of honey this summer. Quite often I smoke them for him when he takes honey off. As all the others seem to tell about their homes, perhaps I might as well too. We have a nice large orchard a little way from the house; my sister and I have just returned from picking apples. We have plums, grapes, choke-cherries, and long blackberries in our orchard. Papa had one swarm which was queenless, and upon examining it he found the young queens had dried up in their cells, and would like very much to know the cause.

FLORENCE WESTOVER, age 14.

Frelighsburg, Canada.

I am sure I can not tell, Florence, why the queens dried up in the cells, unless it was because the colony was too weak to raise a good live one.

CATCHING BEES ON THE WINDOW, WITHOUT GETTING STUNG.

I saw in Mrs. Harrison's letter that she wants to know how many could take a bee off the window and not get stung. I can, and I think almost any one could. NANCY E. CHAPMAN, age 13.

Smoky Valley, Ky.

Well, now, Nancy, I am afraid you are not quite right about this matter. I have seen a great many people try to pick the bees off the window, and not get stung, and I do not now remember of seeing anybody do it, although I do it very often. I take hold of both their wings, and then I can carry them to the door without any trouble. I do not hurt them, and they do not hurt me. I should like to have you little folks learn how to do it, because it saves the life of a bee, besides keeping the room tidy. Who wants to see dead bees lying around on the window-sills? I am sure I do not.

DO THEY CHOOSE A LOCATION BEFORE SWARMING?

Pa's opinion is, that some do and some do not. Neighbors here have known bees to stay on the shore of Lake Erie, hanging on a bush for a week, apparently starved. Another neighbor's children followed a swarm that was flying over to the bush, and saw them enter a hollow elm-tree which they afterward cut down and brought home with the bees in it. Pa had a hive of bees stolen this year.

Merlin, Ont., Can. FANNY GRAY, age 13.

I think your pa has got it about right, Fanny. Perhaps their natural instincts prompt them to select a locality when all things are favorable. But they doubtles oftentimes swarm when they have not made previous arrangements.

THE SUPERINTENDENT WHO USES TOBACCO.

Here I come again, after another book from your wheelbarrow. Gail and I go to Sabbath-school. Our superintendent uses tobacco. I think that tobacco song is just the thing. Kiss cousin Peter for us. Gail forgot to tell his age, which is ten years. I am eight. ROY R. CROWFOOT.

Bloomingdale, Mich., Aug. 31, 1883.

My little friend, it has been said, that "murder will out;" and here we have it right it print, that the superintendent of your Sunday-school uses tobacco. Now, I hope if he ever sees this he will conclude that it ought not to be, and will set a better example before the little boys of his school, and also cease it because the girls feel sorry to think that their superintendent is a tobacco-user.

BLACKS AND ITALIANS.

We have 14 colonies—4 in Langstroth hives, and 10 in American. Pa is a carpenter by trade, and is away all summer; and when the bees would swarm, ma and I would have to hive them. We have kept bees about two years; we had a hive of blacks last spring, and bought five colonies. We are wintering our bees in the cellar. Pa had a new cellar dug for the bees last fall. Two swarms left us — one black and one Italian. The black bees wouldn't stay. Ma and I tried to hive them, but they would not go into the hive; but we didn't care so much if they did go off, because we don't like them as well as the Italians. The blacks swarmed twice. The bees we bought were the Italians. Pa clipped the queens' wings so they would not go away. When the bees swarmed, and I found it out first, I would call to ma, and say to her, "The bees are swarming! come, we must hive them." And she would say, "Let's hurry and get ready, and get our veils and gloves on;" and when she or I would see the queen she would say, "There she is! catch her quick, before she gets away," and she would hold the cage, and I would put the queen into it. I thought that was the best part of the hiving—to catch the queen. I think she is the best bee there is, because she doesn't sting. When the blacks swarmed, one came and stung me on my lip, and it hurt so that I didn't like the black bees; but I like the Italians. We have sold 175 lbs. of comb honey, and 125 lbs. of extracted.

SUSIE BERNSCHEIN.

Jamestown, Wis., Jan. 20, 1883.

AN ESSAY ON THE POPLAR-TREE.

I will tell you something about the poplar-trees in this county. They grow very large—some of them five feet in diameter, and 75 feet to the first limbs.

Papa told me that he counted the growth of one in Fayette County, Ind , that was 240 years old, and 6 feet in diameter. They bloom from the first to the 15th of May, and last usually from one to three weeks. The honey is very rich and thick, but rather dark. The bloom comes before our bees get strong enough to store much surplus, and I think it would be better for bee-keepers to feed their bees six weeks before the poplar blooms, where it grows.

Galena, Ill. FREDDIE L. CRAYCRAFT.

Well done, old friend Freddie. I thought before I got through with your letter it must be written by some one who is an old friend, if I may be pardoned the expression. Now, if our young friends will take to writing up honey-bearing trees in the way Freddie has described the poplar, it will be a fund of quite general interest and importance.

ANOTHER REMEDY FOR THE CHICKEN CHOLERA.

Here we are again. The bees are all right. I got 3 stings one day on my head. I have some white chickens. Bleeding under the wing is good for chickens and turkeys when they have the cholera. My brother has a nice watermelon patch. Don't you think it nice? My mother is staying with my grandmother, so I have all to do. If you like, you may name Peter, Lovin Robert, or Willie Winfry.

Shadwell, Va. JULIA A. GRIFFIN.

Friend Julia, did you not know that it used to be a fashion to bleed people for almost every thing that happened to them? Well, this plan of bleeding has passed away, or at least pretty nearly so, and I do not believe bleeding chickens will do them much more good than to bleed human beings. When chickens have the cholera they generally need all the blood they have got.—Thank you for the picture you sent to Peter. I do not see but that he will have to be called Peter still, even though a great array of names has been sent in for him.

HONEY FROM BASSWOOD ON THE 15TH OF AUGUST.

My uncle's bees are getting along well. He has 14 swarms now. We had 3 swarms all on one day, and I thought I would get tired of them. The bees are busy gathering honey off the basswood-trees. They are just out in bloom. We had some swarms go back to their old box after they swarmed, and come out again the next day and swarm, and be all right.

BELLA FRASER.

Campbellville, Ont., Can., Aug. 15, 1883.

Friend Bella, you have given us quite an important fact, although I suppose you did not know it, and that is, that we may get basswood honey in Canada as late as the middle of August; and I firmly believe the time will come when bees will be moved from Florida to Canada, just to keep pace with the basswood and clover bloom. We have got now the latest period that basswood blooms in the North, and we should be very glad to have some of the friends in the South tell us *how early* they get basswood honey. Who will tell us?

20½ LBS. IN A DAY FROM A SINGLE COLONY, REPORTED BY A JUVENILE.

We had one swarm on a pair of scales that gained 20½ lbs. one day in basswood time, and they gained over 10 lbs. a day for three weeks, and lay still some of the time for want of storage room. They were Italians. Pa has 80 swarms and I have have three—one in a chaff hive; and from that one we have extracted twenty dollars' worth of honey. Pa will get about 3000 lbs.—2000 lbs. extracted, and 1000 in sections; the most of it from basswood. He would have got more, if he had not burned his eye. He has extracted from 14 hives. We had 40 hives with bees in them at the beginning of the swarming season, so you see we have doubled our number, and they have filled up well. The honey season is over.

Pa never had a cigar nor a chew of tobacco in his mouth, and he is 46 years old; and he never drank a drop of liquor. I am never going to smoke nor drink. WILLIE H. DARLING, age 14.

Lincklaen, N. Y.

Why, my little friend, your report is a rousing good one. I am glad to know that you are going to follow your father's example in regard to cigars and tobacco; and, by the way, I think there is a pretty good sermon right here. If fathers want their boys to be clean and temperate, let them set them a good example.

HATCHING QUEENS IN AN INCUBATOR.

I read the account, of how Mattie's father hatched queens, in the Jan. number of GLEANINGS of this year. Two years ago papa had a lot of queen-cells nearly ready to hatch. It was early in the spring, and the weather wouldn't remain clear long enough for papa to make his nucleus. He didn't want to lose his queens, as they were from fine Italian bees; so he got a piece of soft pine board, about 2½ inches wide, and bored holes nearly through it, edgewise, at an equal distance apart, so as to saw between and separate them. He then bored at right angles across the previous borings, through the block, and nailed wire cloth on both sides, and put a cork in the opening. He then cut the queen-cells out, and put them in the cages, so they could gnaw themselves out easily. He then placed them in an "Eclipse" incubator, with three hundred eggs, and the most of them were saved. A few corks got out of the cages, and papa found some of the queens crawling among the eggs. He had to make some of his nucleus swarms, and introduce queens, between showers. The showers come and go quickly in the spring, and bees fly here directly after a shower, and the weather is nice while it lasts. EUNICE A. ENAS, age 13.

Napa, Cal.

Yours is a tiptop letter, friend Eunice. You demonstrate that an incubator will answer nicely in place of a lamp nursery. How much will the incubator cost? You have given us some very important facts, and have told them very nicely.

A STORY ABOUT A QUEEN.

We have four colonies of bees; they are working very hard. We have extracted 150 lbs. of honey from three colonies. I carry the frames to and from the hives. The queen, we got of you; we introduced her according to directions, and two hours after we let her out, the bees balled her. Mrs. Gillam took the ball on a stick near the house, where it is sandy. As soon as she got the queen loose from them she flew away, and she had only the empty cage left, and looked as though she had lost a dear friend. In a minute or more she heard a peculiar buzzing, and, on looking up, saw the queen circling around her hat. She caught her in her apron, took her into a closed room, and the queen flew against the window. She re-caged her, and put her in the hive again, and in 24 hours they gnawed her out. We are proud of her; she keeps the hive full of bees. I am learning a few things about their wonderful ways. **Zella Cutting**, age 14.

Courtland, Ont., Can., Aug. 25, 1883.

IDA'S LITTLE BEE-HIVE THAT HER UNCLE HENRY MADE.

My uncle Henry called to see us, and made a box, or nailed 4 boards together, and called it a bee-hive. He made a bottom to it, and just set it on a board, and made light frames for it. He and my pa broke one of the bee-boxes open, took the honey-comb, and tied it in the frames with wire, and put it in the box he made for the bees. All went in and fastened the comb to the frames. Uncle gave us children a a heap of things. The bees did not sting any but my brother Frank, for he was afraid of them. He says you give little girls and boys a pretty book. I live away off from any big town, and can not write very good letters; but I like pretty books as well as any little girl in town. **Ida D. Woodside.**

Garman's Mills, Pa.

BEES IN OREGON.

I live in Oregon with my papa, mamma, and three sisters. We moved to this place two years ago. When we came here we didn't have any bees. About three months ago pa found a swarm in the field. It was about noon when he found it, so he took a sheet and threw over them till evening, when he took a hive and smeared it with syrup, as we had no honey. He then put it close to the swarm. Early next morning he took some mud and blocked the entrance, and carried the hive up into the yard, and put it in a warm corner. I have been watching them anxiously, and see they have filled the lower story and half of the upper. Papa thinks that buckwheat makes the best honey. The honey that is made of the honeysuckle is a little sour, and has a tinge of bitterness. **Lena Lorentzen.**

Denmark, Oregon.

A VISIT TO FRIEND DOOLITTLE; A HINT ON AUTOMATIC SWARMING.

Last spring pa had 56 colonies of bees; now 125, and many of them are in Simplicity and chaff hives. Some of the bees in box hives are making more honey than those in frame hives. Pa went a short time ago over 100 miles to see Mr. Doolittle and his bees, and came back pleased with his visit. A man near here had two hives of bees sitting quite close together on a plank; one of them was a small swarm, and the other very strong, and a large portion of the bees left the strong colony and went in with the smaller one. The strange part of it was, they did not fly, but just walked on the plank from one hive to the other. **Nina Rothwell**, age 11.

Austinville, Pa.

Thank you, Miss Nina, for the important facts you give. I know bees will sometimes occupy a hive sitting close to the parent hive; and I have been told they went in on foot, as you describe. Now, who can invent a way to get them to do this every time, without swarming out in the air?

SOME FACTS AND SOME QUESTIONS FROM A 9-YEAR-OLD BEE-MAN.

I am all the baby papa and mamma have got. I bought a colt of papa last summer. I value him very highly. He is a sorrel, with a white stripe in his face. His name is Tinker. I go to Sabbath-school. We have been having Advent meetings. Which do you think is the right day to keep? I don't want you to think I am an Adventist because I ask this question. My uncles, Bright Bros., keep a good many bees. Their apiary and bee establishment is about ¼ of a mile from where we live. They make lots of little boxes, which make nice playthings for us little folks. They cage their bees up like canary birds, and send them off to sting folks. I guess I like the honey better than the sting of the bee. Please tell me how it is with you.

Mazeppa, Minn. **Cecil Baughton.**

And so, friend Cecil, you think our friends Bright Brothers send off the bees in those boxes that look like bird-cages for the purpose of stinging folks, do you?—In regard to which day is the proper one for Sunday, it seems to me if none of our people were guilty of any worse sins than making a mistake in regard to which day should be kept sacred and holy, I think we should be pretty near millennium. I should by all means advise keeping that day as the Sabbath that is generally kept by the people in whatever country I was in. "The letter killeth, but the spirit maketh alive."

FROM 5 TO 1, AND THEN FROM 1 TO 5 AGAIN.

Our bees did not winter very well. All of them were alive when we took them out of the cellar, but not very strong. Some way or other they all died but one, and they went through the rest of the spring all right. We have now 5 good stands from that one. Isn't that pretty good? One swarm came out early Monday morning and settled low on a quince-bush. The swarm was about two feet long and about six inches through. We could just set the hive under them. We had five stands last fall, and now we have five this fall. I do not know whether we shall prosper very well or not. We wanted to move a hive the other day with the top box off, and pa picked up the lower part to where he wanted it, without veil, and he said that you could not have got him to do that last summer for five dollars. He said if he had a veil over his face he was not afraid of them. I go out among them, and never get stung. I never had a veil over my face about the bees. I do not do much with them, though, but I expect to be a bee-man some day. Do you think bees that swarm the last of August will make enough honey to keep them through winter, if they have no queen? We have not looked in the old hive for a queen yet. Our bees seem to be bringing in lots of honey and pollen. They seem to be working on smartweed now. Pa thinks it is too late to transfer the combs to Simplicity hives. Pretty nearly every one around here keeps bees. Two of our hives have glass in the back, so we can look in. I went out to one of the hives to-day, and took away the board we had over the glass, and the bees did not come about me any; but I went to the other hive, and they did not like it very well. They came around the hive and told me to get out of there, and I did; but they did not sting me, though. What makes the bees go off and leave no queen? ours did. **Walter G. Comin.**

College Springs, Ia., Aug. 28, 1883.

Friend Walter, I do not believe the bees do go off and leave the queen. The queen oftener goes off and leaves the bees. But if your hives are properly looked after and cared for, there will never be any queenless stocks. Your little story is a pretty fair type of the way bee-keepers often manage.

ERNEST'S STORY ABOUT THE EDUCATED CAT.

I thought I would write you a letter about bees. I am sorry to say that the honey crop was not large this year. The hot dry winds we had in June cooked the blossoms.

My father has about 120 stands of bees. He had 7 stands melt down this season. He got only 3600 lbs. of honey.

My mother has a cat that will drink milk with his paw. When we put milk in a little cup he will drink with his nose until he gets it drank down so low that he can not reach it with his nose, then he will put his paw in and get it covered with milk, and then he licks it off from his paw. ERNEST HILTON, age 10.

Los Alamos, Cal., Aug. 22, 1883.

Thank you, Ernest. I would go several miles to see that cat lift up milk with his paw. Your story is well worth a book. I like to know of these queer tricks of domestic animals, on several accounts. One is, that it seems to give us a better understanding and comprehension of them. We know them better, you see. As civilization progresses, we steadily gain in our knowledge, not only in regard to bees and their habits, but also of all animated nature round about. There is now in our land an organized society "for the prevention of cruelty to animals." They have such a society in San Diego, Cal., and my brother is president of it; and every few days he writes to me something about what they are doing for the sake of the poor dumb brutes, and especially about the efforts they are making to render their lives happy. And is it not a grand and glorious work, to study the ways and means of adding to the comforts and happiness of these poor mute friends of ours? When I think of it, it makes me like cats and dogs and horses and cattle and chickens and bees. Yes, and while I think of it, it makes me like little babies too. Do you not believe that? And the great and final end of it is, that it gives me a greater and wider and grander love for God, who, in his infinite mercy and goodness, *made us all.*

BIBLE VERSES, ETC.

As you are such a friend to children, I should like to be among them. Father keeps bees, and has two bee-yards — one at Pendleton, and one at home. One yard has about 170 hives, and the other has 80. In answer to Jesse Gulley's question, "What is the least verse in the New Testament, and how many words does it contain?" I answer, "Jesus wept," John 11:35. I also ask, "How many times does *and* occur in the Bible?" MARTHA MOFFATT, age 13.

Riceville, Ont., Can., Aug. 27, 1883.

Friend Martha, it is an excellent idea to become conversant with the Bible. But I do not believe I would take very much time in trying to find which is the least verse in the Bible, or to see how many "ands" there are. The Bible was written for us, to guard us against evil and sin, and to tell us of God, and to let us know what he would have us do. Some time ago I found a friend in jail, and I earnestly recommended him to study the Bible. One day I was very much encouraged to hear him say he had read the Bible more since he had been in jail than in all his life before; but on questioning him a little further he said he read in some paper of a prize to any one who would find some little thing in the Bible, I have now forgotten what, and he had been reading this book day after day for nearly two weeks, hoping to get this prize. So far as I could learn, his Bible-reading had not made him a bit better; in fact, it made him seem to slide over every passage that ought to have sunk deep into his heart, and shown him what a sinner he was in the sight of God. Now, reading the Bible, of itself, does not necessarily make anybody better. I am not sure but that it may make them worse, under some circumstances. It is the *searching* of the Scriptures with an earnest desire to make our hearts clean in the sight of God, that we want to do. Will our little friends try to remember this when they search the Scriptures?

LETTING BEES CRAWL INTO THE EAR — A CAUTION.

My papa brought 15 colonies of bees from Maryland to this place about the first of May. They came to Blairsville, about a mile from here, and they had been handled so roughly on the cars that bees were flying from nearly every hive. Papa took them outside of the depot, and tore off the wire cloth from the entrances, and gave them a good fly, as it was the only way to save them. A great many people were stung in passing the hives. The next morning, papa nailed up the hives again and brought them over here. So many bees flew away that they were nearly all very weak, and did not do well this year. We shall have only about 200 lbs. of comb honey. We increased to 25 colonies. Our bees did not swarm until the basswood bloomed, and then just as they got to work nicely in the sections they swarmed, and then all work ceased in the boxes.

I must tell you a strange story about my little brother, 5 years old. He was standing near the bees, when one stung him on the cheek, near his ear, and the bee, in twisting around to get the sting out, saw the hole in the ear, and crawled in. Papa pulled it out. Now, there was nothing strange about that; but what follows is what we think so curious. In less than a week he was playing near them again, when another bee stung him near the same place, and then popped into the same ear. My brother is so much afraid of bees now that he will not go near them; and if he hears a bee buzzing, he claps both hands on his ears and runs away.

CORA MAJOR, age 10.

Cokeville, Pa., Aug. 25, 1883.

Friend Cora, I know what it is to have a bee crawl into my ear. I wrote about it to the bee-folks a few years ago; and I told you that, when a bee comes buzzing about my ear very close nowadays, I am a good deal like your little brother five years old. I think bees are more apt to crawl into cavities in one's clothing, or get into one's ear, when the weather is rather cool. When a bee is partially chilled, he seems to be apt to crawl into places that seem to be quite warm; and the human ear is in some respects like the cell in a honey-comb, only it is much warmer. When a bee gets into your ear, you had better poke him out about as lively as you can.

FROM 3 TO 8, AND 300 LBS. OF HONEY.

My father has 8 stands of bees. He had 3 last summer, and they made 300 pounds of honey and swarmed 5 times. Father made them a house to live in. This is my first letter. ELMER OTTOWAY, age 11.

Flushing, Mich.

MOLASSES MADE OF WHITE SUGAR.

I go to school. I like my teacher very well. My pa has 6 hives of bees. He keeps them in the cellar in the winter. Our bees like molasses made of white sugar. Pa takes GLEANINGS, and he likes it very well. Do I deserve a little book for this?

Atwater, O. ALLAN MYERS.

THE BABY THAT CREEPS BACKWARD.

When I wrote to you before, my little sister was 7 weeks old, and now she is 7 months old. She creeps backward (but her eyes are not black), and can almost stand by a chair alone, and push it along.

MINTA F. MISER.

Minta, I should really like to see a baby that creeps backward.

THE MOON CHILDREN; 40 LBS. OF HONEY IN 3 WEEKS.

I have been watching the bees. One of the new swarms made 40 lbs. in boxes in 3 weeks. We had 12 swarms of bees; we have got 27 now. I have two swarms. BENJAMIN J. MOON.

My brother Bennie has 2 swarms of bees. He had 3 swarms; but one died in the winter. We sell honey at 25 cents a pound. There were 3 swarms came out yesterday. INA MOON, age 11.

Youngstown, N. Y., July 20, 1883.

A NOVEL PLAN OF HIVING BEES; BY A 9-YEAR-OLD-BEE-KEEPER.

I THOUGHT I WOULD TELL YOU HOW PAPA HIVES HIS BEES. HE SETS THE NEW HIVE BESIDE THE OLD HIVE, AND WHEN THE BEES COME BACK HE THROWS A BLANKET OVER THE OLD HIVE. LEORA M. FAYLOR, AGE 9.

SUFFIELD, OHIO.

Very well done indeed, Leora. You see, we have given your letter just as you wrote it, right out. The plan you mention may be of value to a great many bee-keepers.

A BOY'S COMPOSITION ON BEES.

The bee is a very independent creature. It asks no quarters, nor gives any. It sets up a kingdom of its own by electing its own king and queen. They then become rulers and governors of their own kingdom, by making such laws as to unite them together in one band of unity. After being organized, they put their sentries, or guards, out on duty to watch in case of danger for the enemy's approach. Being satisfied that peace reigns within and without, the king and queen consult together about the manner of building their house. Having formed their plans for the same work, they call their family together and send them out by twos in search of such material as will complete the structure of said buildings. FERDIE LANGSTAFF.

Indianapolis, Ind.

Pretty good, Ferdie; but I am afraid there is more poetry than truth in some parts of your composition. I should not wonder if some day you would make a Fourth-of-July orator. But if you will excuse the liberty I take, I would suggest that you study up the subject a little more carefully.

THE HONEY WAS NOT OLD ENOUGH.

Our bees are getting lots of honey now. I have one swarm. We have extracted some honey, but it doesn't taste well. I guess it is not old enough yet.

Linn, Ia. WILLIE GRANT WRIGHT, age 14.

Friend Willie, I am inclined to think you did not leave your honey in the hive long enough, so it would ripen thoroughly. Better have it mostly capped over before you throw it out.

23 STANDS OF BEES AND 600 LBS. OF HONEY.

My grandpa has 23 stands of bees. He has taken 600 lbs. of honey this year. He has taken GLEANINGS five years. I like honey. I am a little crippled boy, 12 years old. I walk on one crutch. Pa has to take me to school. I can walk to Sabbath-school every Sunday. It is a quarter of a mile. I have only one brother, 7 years old. I live in the country. This is my first letter to the JUVENILE.

El Dorado, O. CHARLES H. COBLENTZ.

THE ASTER AS A HONEY-PLANT.

Grandpa has two hives. Pa is a preacher, and sells Bibles. A school miss has just been here and bought 22 five-cent Testaments for her scholars. Grandpa did not get any honey this year. He had no extractor. We have a great deal of the aster weed, from which bees make a great deal of honey. It blooms in the fall. They make more honey from this weed than from any other plant in this country.

ZELLA C. METHENY.

Charleston, W. Va., Jan., 1883.

FROM 19 TO 41, AND 360 LBS. OF HONEY.

We started last spring with 19; they came through the winter in good condition, and increased to 41, and took out 360 lbs. of honey. In the fall we fed one barrel of sugar, and united them down to 26. They have done very poorly this year. I saved up all my money to get a hive, and got one a year ago last spring, and now I have four; so you see I am a bee-keeper myself. I have been going to Sunday-school all along, but it has stopped for the winter, as we have two miles to go.

Aberdour, Can. ROBERT W. MURKAR, age 12.

THE DUCKS AND THE PARTRIDGES, AND SOMETHING ABOUT THAT RIDDLE.

Mr. Root, I was not yarning about the ducks eating the little partridges. I saw one run under the floor with one in its mouth, and the other two were gone, and I guess they got them too. My riddle is composed of bees and honey; and you will find it in the Bible. If you can't find it for the next JUVENILE, *I* will then tell you. We have 40 stands of bees. JOSIE DAVIDSON.

Pisgah, Ala., Aug. 30, 1883.

I guess, Josie, the 14th chapter of Judges will tell what your riddle is.

A LETTER FROM GEORGIA.

I have not seen any letters from Georgia, so I thought I would write. My pa keeps bees. Last spring he had 6 colonies. Now he has 16. He had 21; but 5 of them died on account of robbers. He bought 3 colonies, and Mr. Wm. Oliver gave him one Italian queen and 12 bees. He went to his other bees, and took four or five pieces of comb full of young bees. When they hatched out there was a nice hive of them. They raised a young queen, and the old one went off with the most of them, and the others died. JAS. W. CALDWELL, age 14.

White Sulphur Springs, Ga.

MR. DOUGHERTY'S BEES AND HONEY, AND THE $27.00 PREMIUM.

I thought I would write and tell you about Mr. Dougherty's bees. He has a great many bee-hives. I often stop and look at a bee, and see how busily they work laying up their food for the winter. He went in partnership with a man whose name is McKee; and when they took their honey out to the fair this year they got the premium, which amounted to $27.00. EDDIE ALLEN.

Indianapolis, Ind.

FRANK AND HIS MOTHER AND THE BEES.

Pa had 6 swarms this spring, and he has 19 now. Mother and I extracted 66 lbs. of honey from six stands. The two first swarms went off. The first swarm went off without clustering. The next swarm we hived, and the next day it went off. Can you tell why the first swarm went off? We put in one comb of brood from another hive, and they stay now. I made a little hive with five racks in it, and I want them to put bees in it. FRANK WEAVER.

Ligonier, Ind.

A SWARM GOING THROUGH A SWARM.

Father takes GLEANINGS. I claim the JUVENILE as mine. As they were talking about bees going off without clustering, I thought I would tell you about a swarm we had, as we never had one act so before. One swarm came out and was just alighting when another came out and went right over and through the others, and went to the woods without alighting. The boys followed them about a quarter of a mile, and then lost them. When the season commenced we had 40 swarms in working order, and 20 weak ones. We think it is a good season for honey in our location. Father makes bee-hives to sell. I nail the sections and racks. ETHEL ANDERSON, age 12.

Cambridgboro, Pa.

A POUND OF BEES JUNE 16, SENDS OUT A SWARM JULY 23.

My uncle has 32 stands of bees; 8 of them are Italian. He takes the JUVENILE. I like to read it very much. Two swarms of his Italians came out to-day; one swarm went back. He sent to Illinois the 16th of June and got 6 one-pound boxes of Italian bees; each box contained one Italian queen. These two swarms that came out to-day were from the ones he bought. I am stopping at his house a few days. I like to make section boxes. I have two sisters; one is 6 years old and the other 2 years old. I never wrote for the JUVENILE before. I have a bird and a kitten. My uncle calls his Italian bees his pets.

Corinna, Me. BERTHA M. CORMICK.

HOW THEY GOT THE BEES OUT OF THE HEMLOCK-TREE, AND WHAT BECAME OF THEM.

My pa has about 110 swarms of bees, and I have 10 swarms. In summer I watch the bees, and hive them when pa is away. We winter our bees on summer stands. I like to work among them, putting on and taking off boxes. Pa had a swarm go to the woods. I followed it, and it went into a hemlock-tree, and pa cut it down and took an upper story and put the bees into it, and left them by the tree one day; and when he went there the bees were all gone. W. E. COLEMAN.

Port Allegany, Pa., Feb. 7, 1883.

I think, my little friend, I would not have risked them off there, even for one day. Would they not cluster in the hive so you could carry them home?

THE LETTERS THAT WERE TIPPED OVER.

As my sister is writing a letter, I thought I would try to write one too. I am seven years old. I go to school. I saw a letter in the JUVENILE that was written by a six-year-old girl who had part of her letters laid down to rest. But I will try to keep mine up. If this is not good enough to put in print, put it in the waste-basket. CARRIE A. MISER.

Mantua, Ohio.

Very good, Carrie. It is true, your letters are not laid down quite as badly as in the letter you tell about; but if you will excuse me, I think there is some chance for some of yours to be straightened up a little better.

THE YOUNG TELEGRAPH OPERATORS.

My papa says you are a great friend of children, and want them to write you some letters. I will try to give you an introduction to myself. I am a little boy nine years old, and am a telegraph operator, and so is my brother Frank. He is 16 years old. We have a telegraph line from the depot to our house, where we do our practicing. We can read off the main line. My papa runs the steam-pump for the railroad, and keeps bees. He has 54 swarms, all in Langstroth hives, nearly all Italians. I have two swarms. I must watch the bees during swarming time. I go to Sunday-school, so does my brother Frank, and my sisters Alice, Jessie, and Gertie. Papa says you like children who go to Sunday-school. Ours is held in the chapel of the North-Western College. L. EDMUND STOVER.

Naperville, Ill.

HONEY, STRAWBERRIES, AND THE BABY.

I promised in my last letter to let you know how my mamma and I get along with our bees. We started with 29 colonies, and now we have 72. The spring and summer were very wet, so they can't work half the time. White clover is plentiful yet. We took off 115 lbs. of honey last week in one and two pound sections, and will take off more in a day or two. We have two observatory-hives. We like to see the bees through the glass. My sister Mina says she wrote you some nice verses. She thinks it was in May, and you did not publish them. She says she thinks you forgot them, on account of that new baby at your house. She wants to write and tell you about the bees, but is afraid you would not publish it. Can't you name your baby after me — Freddie? If so, I will send him my picture, or treat him to the strawberries, if you will bring him here next year. We sold over 4000 quarts this year, and I don't know how many raspberries. We have been very busy. I like to work with bees; they don't often sting me, though I work with them bare-footed. Mina says they won't sting homely boys. My father died 4 years ago. He liked GLEANINGS very much. We had 165 colonies when he died. He loved bees.

Keithsburg, Ill. FRED WIRT, age 14.

That is a very good letter, Freddie. I should think you might afford to treat to the strawberries, if you had 4000 quarts. I think that is more than I ever saw in all my life, and I think it would be a nice place to go to, would it not, Freddie? I am very sorry if I overlooked any of the little letters, but I do not believe it was baby's fault. When we have so many we are obliged to select those we think are most valuable; that is, which give the most valuable information.

583 LBS. FROM A COLONY, REPORTED BY A JUVENILE.

My papa has 100 stands of bees. My brother and I help to extract. We have 3 tons of extracted honey, and about one ton of comb honey. We have a handy tank that holds a ton and a quarter. A few days ago my papa got 3 queens from Mr. Heddon; but if they are any better than one of ours they will have to "git up and git," for one of ours has made 583 lbs. already, and the season is not nearly over.

ANDREW FLORY, age 9.

Lemoore, Cal., July 3, 1883.

FOR VALUE RECEIVED.

My pa keeps bees. He has got 38 stands. Pa sold 333 dollars' worth of bees and honey last year. He had 30 stands last spring. I have got a note like the one in your book, only it has a "Post" instead of a "Root" on it. It is worth 13 dollars.

FRED GILLETT, age 7.

Brighton, Ohio, Feb. 13, 1883.

Now, friend Fred, that is a pretty big joke for a boy only 7 years old, where you talk about Posts and Roots. If anybody should ask which were more substantial, I do not know but that I should have claimed that the Root would be best on the end of a note. Roots are generally the hardest to get out, are they not? But did you ever think, Fred, that Roots and Posts, and every thing else, and everybody else, for that matter, must pass away? There is only one thing in this whole universe that shall not pass away. Who can repeat that little text that tells what it is?

CLARA'S BEES, AND SOME SUGGESTIONS FROM HER IN REGARD TO BEE-KEEPERS' IMPLEMENTS.

Five years ago papa bought a swarm of black bees of our neighbor. We now have bees in 122 hives. Last summer papa gave me a hive of bees. He is to have the increase for taking care of them, and I am to have the honey for helping him take care of his. I now have 106 lbs. My! don't I feel big, though? We've taken off 1040 lbs. altogether. I think that Charley Scherf (that is our hired man's eldest son) and I look something like the picture in the JUVENILE, only we do not wear veils, and our smokers are Bingham's. Charley is 14, and I am 11. We have taken off two or three hundred lbs., and hived several swarms alone. A swarm came out and alighted on the top of a maple about 30 ft. high. The worst of it was, they were scattered along a limb at least six feet long. Papa climbed the tree and sawed it off without getting a single sting. We like a turkey feather with the edge clipped off, much better than a yucca brush, for brushing bees off the combs.

CLARA JONES.

West Bend, Wash. Co., Wis., Aug. 2, 1883.

A BOY'S TESTIMONY, AND SOME OF HIS IDEAS IN REGARD TO SWARMING.

Tell "Old Fogy," who states on page 242, May number, that he has never seen or heard of a swarm going off to the woods without first clustering, that he is mistaken, for I had one that did. Father bought 2 colonies the first of June, and I commenced my first lessons in bee culture. Last Sunday one of them swarmed and started for the woods as soon as they all got out of the hive, without alighting on any thing. Father and I started after them with the looking-glass, and followed them about half a mile, when the sun came out bright, and I threw its rays through them with the looking-glass, and they came down and alighted on the top of a dead hemlock-tree that had been blown over. We hived them and got them home all right, and they have filled their hives nearly full already. This is the first time I ever saw bees swarm; and if they all act like this one, my bees will never swarm again, if I can prevent it.

H. L. HUTCHINSON.

P. S.—They swarmed again, just as I had signed my name, and alighted on a plum-tree in the garden; we hived them all right. I guess swarming is not as bad as I thought it was.

H. L. H.

May, Mich., July 21, 1883.

We have 10 hives of bees. We had only two hives last summer. We have a garden, and pa is so busy that mamma and I have to take care of the bees. I help papa pick strawberries, but they are all gone now. I help him pick beans and pears for market. Mamma said she could not do without your smoker and GLEANINGS, and I think ever so much of your JUVENILE.

Mamma found a wild plant the other day, and the bees were thicker on it than she ever saw them on any other plant. I will send you one of the flowers. Do you know what it is? They work on one of our tame flowers a good deal; it is the sweet scabious, or mourning-bride. Do you know of it as a bee-plant?

ADDIE KENDRICK, age 9.

Boulder City, Colo., Aug. 1, 1883.

We can't tell the name of your flower, Addie, because you did not give us any leaves. We always want leaves as well as "posies" when we undertake to name a flower. I'll explain to the friends that it is a good-sized bright yellow flower, that tastes awful bitter. You see, I always taste of every thing when I can't find out any thing about it any other way.

GRACIE FOSTER AND HER FATHER'S "DAY STAR."

Pa visited you five or six years ago, but you were so busy he said that he didn't get much time to talk. He visited you when we were on our way to New York in a horse and wagon. We have the horse yet. It is about 20 years old, and we call her Flora. She is so gentle that we children can go up to her any time or anywhere. I take drawing lessons every afternoon for 1½ hours. Papa wants me to be an artist or engraver. I like to draw pretty well. When I am not tired, I set type for our little paper. I began when I was six or seven years old, but never set much until I was eight. I am now 12. I am going to try to get a library. I have two or three books now — a very small beginning, but they will help.

Mt. Vernon, Ia., Aug. 6, 1883. GRACE FOSTER.

Why, Gracie, I did not know that your father paid me a visit. Why did he not say, when he came up, that he was A. F. Foster, editor of the *Day Star?* I want to explain to the juveniles that the *Day Star* is a queer little paper, published about "Peace," and the funniest thing about it is that friend Foster sends it everywhere without any pay. Any of the children can have it right along if they will just send friend Foster their names. If you want to put in some postage-stamps, no doubt but that they would come very handy, for friend Foster sends it free and pays postage. This is the paper that Gracie sets type on. If you write *her*, I suppose it will do just as well. May God bless you and your father, my good little friend.

Our Homes.

Thou shalt not take the name of the Lord thy God in vain.—EXODUS 20: 7.

IN the first part of this number I have told you a story of a boy who was tempted and led to drink. In my talk I dwelt especially on the danger of having our boys exposed to such temptations as saloons. I endeavored there to show, that although the boy was perhaps at fault, he was not alone to blame. Now, we who are laboring for the salvation of souls work in two ways. While we earnestly strive to have temptation kept out of the way of the youth of our land, we also try to instill into the minds of these same youths principles that will keep them from the temptation. We try to have their minds so firmly anchored "on the Lord's side" that even the saloon-keeper with poisoned lemonade would be unlikely to get them from the path of duty. It is true, that almost any boy might be persuaded to take a glass of lemonade, and might in that way get a taste for strong drink; but we should want that boy so brought up that, when he discovered that he had been entrapped into taking something that he did not understand, he would go to his mother, father, or best friend, or guardian, and inform him in regard to the matter. Almost all departures from the path of rectitude and virtue come about gradually. In the story I have already told you it would seem almost certain that the boy was a victim of evil influences and surroundings, rather than bad at heart. On questioning closely I was led to believe, however, that there was something back of it somewhere. Those conversant with crime will often find out where the trouble lies by a little questioning, much as a kind mother would take hold of a sore finger. She might say, "My child, when did this come? what *makes* the swelling and inflammation on that little finger?"

"Why, mother, it just came of itself. I don't know what in the world makes it so awful sore."

"I think, my son, there is a sliver in it, and we must take a needle, and may be a very sharp knife too, and get the sliver out."

"But, mother, I am sure there isn't any sliver there, or I should feel it. I have not had any sliver in my hand at all."

The mother has, however, seen many boys, and she knows pretty well all about slivers; and so she quietly sits down by a good strong light, and in due time she carefully and lovingly picks out a great black naughty sliver. The little one may cry during the operation, but she knows full well that its tears of pain will soon be changed to tears of joy and smiles; and she saw, too, perhaps, there was no other way than to dig right down into the soft little hand to get at the seat of the mischief. Well, I felt something the same way about this young friend of mine. When I would start to go away he would say, "Oh! don't go just yet, Mr. Root;" and I knew he was willing to talk, and tell me about even the bad part of his life, if I sought to get at it with a view of helping him to a better state of mind and a better life. He admitted that he not only drank, but used tobacco. But he said he knew nothing of the habits until within the past year. I asked him what he worked at when there was no school. It had been mostly farming.

"Have you learned to swear also?"

He admitted he had.

"Can you remember the first time you ever uttered an oath?"

"Yes, Mr. Root, I can."

And then he told me all about how it happened. It was not while he was in company with bad boys: it was while he was alone at work in the cornfield. He got tired and warm, and rebelled against his lot in life. He was "weary in well doing," and Satan entered into his heart and made him take in vain the name of the God who gave him life. My friends, I fear many a sad life is commenced in just this way. Instead of taking up patiently the lot in life that God had given him, or working quietly and steadily until he could honestly command a place more to his liking, he cherished rebellious and wicked thoughts, and encouraged them in his heart, until they broke forth in *blasphemy* toward his Maker. Not long after, he got hold of a book,—the life of Jesse James. Other boys might read such a book as this without any apparent harm, perhaps; but to one in his state of mind it was rank poison, and acted on him as the poisoned lemonade acted on the brain of the other boy. To his rebellious and disordered imagination these adventurers seemed something worthy of emulation, and in one sort of way he honored the man who robbed honest people of the money they had earned by the sweat of their face, of the money they labored for and saved up. Drink, of course, fed and inflamed these feelings, until he thought it would be a grand thing to defy the laws of our country, and to live upon the hard earnings of others. How many are there who read these Home Papers who have not some time in their life read with interest the daring exploits of highwaymen? I believe the number is less now than a few years ago. Things are changing, and our boys find sufficient excitement and adventure in legitimate business, and, I trust, enough fascination in such simple, harmless, and innocent industries as keeping bees for a living. Think of the contrast. In keeping bees we take from dame Nature, and she smiles her approval by rewarding us with the gains of a bountiful harvest. God smiles, too, and gives us a feeling of peace and enjoyment in our hearts, which is, perhaps, one of the sweetest rewards that fall to the lot of humanity. Now, what happiness can there be to him who robs his fellow-men, even though he does it in such a wholesale way that he defies the authorities who seek to arrest him? Do you not see, boys, that swearing, drinking, tobacco-using, and the like, all proceed from a wrong attitude of the heart? If the heart is right, the actions will be right. If one in the inmost recess of the heart has deliberately decided to do wrong, then all these other things follow.

We sometimes hear of men selling themselves to Satan. Such things are heard of now only in old traditions; but I have thought there was a world of truth in it. It is not an easy thing to break away from strong drink, and there is some sort of reason why it is hard to break away. The same applies to the use of tobacco, although it seems a little hard to show why young men should commence in the first place. But, why should anybody swear? During all these years that I have employed boys, I have seen some who started quietly and honestly, and with great promise, but who finally learned to swear. Why should it ever happen? I have watched their decision, and have noted the state of mind leading to it. I have noted their attitude before they ever uttered an oath or took God's name in vain. The transition from a meek and humble spirit to that of swearing was much like the case I have mentioned of the young man in the cornfield. It was a gradual receiving and giving way to bad impulses.

God has implanted in the human heart what we term reason; or, we might say, wisdom or judgment. There are certain things we know are right, and there are things we know are wrong, or, at least, seem so to one accustomed to self-control and of mature years. The child, or even the young man, may have mistaken notions or ideas; but when the judgment is matured, every intelligent human being is capable of having correct opinions on almost all questions. There seems to be a kind of instinct that prompts in the right direction — something that tells us when we have done wisely and well, and something that also tells to the contrary.

Within the past few years I have been questioning myself, or seeking and asking the best wisdom and judgment of *myself* (if you will excuse such an expression), of what is probably correct or right in regard to certain problems. One of these problems is the future existence of humanity. Well, friends, I presume you are well aware that the Bible tells us very little in regard to this future existence; but it is asserted plainly and unmistakably that there is such a future state of existence. Well, now, a sort of instinct tells me the same, and I think it would also tell me the same if I had no knowledge of the Bible at all. This instinct, or conviction (which is, perhaps, a better word), does not say what that existence shall be; but, like the Bible, it says very plainly there is something beyond this life. This conviction is strong and clear when I am striving to do right, and laboring for the good of humanity and for the saving of souls; but when worldly cares throw me off the track, and make me forget the highest call I know in life, or God's call if you choose, this conviction seems faintest. I presume you have all had similar feelings. "If any man will do his will, he shall know of the doctrine." When I am doing God's will, the conviction is strong and clear, and I have no doubts. When I am violating his commands in thought or deed, doubts generally come up, and this conviction of the future state seems dark and uncertain. Well, many times of late the question has come up, as one after another was taken of those I knew intimately, Is this one or that one saved? Of course, these questions rest with God alone, and we have hardly a right to discuss them, unless it be in some way that will be for our own good, or warning to us. I have known men who were suddenly stricken with death while in the midst of intemperate habits. This conviction I have been speaking of would indicate to me that such a one could not well hope to receive God's promise. Another who is taken away while intently occupied with worldly matters, almost forgetting God, I should fear would be among the lost. Men have sometimes died in a fit of anger, and I have thought that, if their general lives had been lives of humility and obedience toward God, *this* act might be forgiven. I have also thought that God *might*, under some circumstances, pardon a suicide, though I confess, that perhaps my feelings are prejudiced where the departed person was an intimate friend of mine. In considering these things I have wondered what kind of a sin would be most unpardonable in God's sight. You know the Bible speaks of an unpardonable sin. Well, the result of my deliberation on this matter has been that the most grievous sin that a human being can commit in the sight of God is to curse his Maker. Sins against your fellow-men are bad enough, but they are not to be compared with sins against God. Sins against your own self are bad enough, and for one to take his own life would seem about as great a crime in God's sight as it were possible for a human being to meditate on; but, my friends, taking God's holy name in vain, I am ready to believe, is worse than this. It is true, in the former case the sinner can not repent, because he has, by his own act, cut off all opportunity for repentance, while the sin of taking God's name in vain may be repented of.

We come into this world to do good or evil. How many times do we read in the Old Testament, "And he did evil in the sight of the Lord"! So it is now. We are all doing right in the sight of God, or we are doing evil; at least, every human being proposes to do good or to do evil; and there is no one act in this world that seems to so plainly indicate that a boy or man has made a deliberate purpose of doing evil, as when we hear him uttering oaths. If there is such a thing as selling one's self to Satan, I should take it for granted that one who deliberately curses God wishes to announce it to the whole universe that he has sold himself to Satan.

Last winter I met a middle-aged man in our county jail, who was in there for selling whisky. Several saloon-keepers were there, and I asked each one of them singly if he had ever made a profession of religion. This man replied that he had, and I talked the matter all over with him. He told me in sadness that the best hours he had ever known was when he was a consistent member of the Methodist Church, and it was only one short year before that he stood among his neighbors and friends, and declared to them his purpose of serving the Lord. Soon after, he was induced to buy the village hotel, and in it was a bar. He made money by his liquor trade; but as the money came, his religion went. He could not be a Christian, and sell drink to his fellow-men. The place finally got to be so bad that he was fined and imprisoned. I found him in the jail, and had long talks with him, and he seemed almost ready to give up his hotel, and every thing else that stood in the way of his serving the Lord. At our last meeting in the jail I took him by the hand, and asked him to hold fast to the strong Arm, no matter what happened. He looked up and smiled, although he did not readily give a positive promise; and as I saw him no more, I had almost forgotten him. Last evening a friend told me the following:

He went back to his old business, and became intemperate; not only himself, but one of his boys about fifteen years old learned to drink. One day last week he had occasion to leave home; and before doing so he told his wife to be very sure not to let the boy get at the liquors. The father came home intoxicated, and learned that the boy had been drinking also. He asked his wife why she did not do as he told her. She replied that she did do the best she could, and told him he would have to stay at home and take care of the boy himself. She went into an adjoining room, and heard him say, "Good-by, Rhoda," and immediately afterward heard the report of a pistol. He had shot himself, but it did not kill him immediately. Physicians were called, but he ordered them off the premises, and declared he had shot himself with the intention of making a finish of it, and die he would; and, turning over to the opposite side of the bed, declined any treatment. He died last evening. Now, friends, if such a spirit is not the spirit of Satan, where do we find Satan? Some one has declared, that alcohol is the Devil is solution. Does it not seem to be just about that?

I have told you the above little story to show you the attitude of the human heart when it rejects God. My friend, are *you* rejecting him? are you a swearing man? do you ever take his holy name in vain? If so, pray consider we are all serving either God, or Satan, the adversary of man and embodiment of evil. We all have stubborn wills; and unless these wills are broken, or become subservient to God, we are on the ground of the enemy.

The sacrifices of God are a broken spirit: a broken and a contrite heart, O God, thou wilt not despise.—Ps. 51:17.

I know the belief has gained ground in some, that a submissive spirit means a weak spirit. No greater mistake was ever made. Our young friend in jail, in giving a reason why people swear, said that it adds emphasis to their words. *Does* it add emphasis, boys? Do you have more faith in a man who declares with an oath that he will pay for a thing you trust him for? To be sure, not. Men who take God's name in vain, to emphasize their assertions, are almost invariably men who can not be trusted. If you look about you, I think you will find it so. My friends, it is surely true that nothing weakens your standing among men more than the fact that you are a swearing man. Men who are great in the best sense of the word are quiet men. You see a man who commands great wages (and I have respect and honor for the man who can command a salary of from $10.00 to $25.00 per day), and he is always a quiet man. His mildest words have more weight than the loud tones of a profane swearer. People are often deceived for a time into thinking that recklessness means courage. The man who shot himself defied God and man, and, without care or compunction, flung himself into the fathomless abyss. He found his command over his boy was gone. Instead of helping his poor wife in her efforts to bring the boy up to an honest and honorable life, he shirked the whole responsibility, and left it all for her, by an act that we can hardly find words to express it as it should be. He sold himself to Satan irretrievably, and through all eternity. One who takes God's name in vain does this in another way. He curses every thing that is good, noble, and holy. Very often, after a man professes to be a skeptic, he declares he does not believe in Jesus Christ nor the Bible; but if he has good common sense, he well knows in his inmost soul that there is a wise and loving God over all. Now, the swearing man curses *his* God—not the God that anybody else has proposed, but his Maker and Ruler, the Architect. In other words, as everybody knows good from bad, the profane man rejects good and welcomes bad. If you do not agree to this, listen to the words that you hear such a man use, and study their meaning. Why do drinking men and criminals almost invariably swear? and why is it that the phrases and the words which they use are the holiest that they can possibly command? There seems to be sometimes a Satanic ingenuity exercised in coupling sacred words together. Another thing that indicates the Satanic origin of words of blasphemy is, that he who utters them seems to be impelled by some unseen power to go on from bad to worse, even on the slightest provocation. I have told you of the wife, who simply remonstrated for his punishing the children when they had committed no offense. Under the influence of liquor, he cursed her. This other one, under the influence of evil, and a slight provocation, deliberatly shot himself. Do you remember when Jesus had given Judas the sop, that John says, "Satan entered into him"? Does it not seem in the cases mentioned, that Satan had literally entered and taken possession?

Now, my friends, when you are tempted to swear again, please consider whether I am not right in saying that the oaths you utter are a tacit acknowledgment that you have opened the door of your heart to Satan, and that he has entered in and taken up his abode. You have for the time yielded to the Prince of Darkness, and to evil, and have voluntarily banished yourself from the Lord, and from Him who is the light of the world. "Thou shalt not take the name of the Lord thy God in vain." This text comes to us down through ages, and goes through all eternity. No matter who you are, or what you believe, or whom you worship, have you any right, or can there be any necessity or defense, for setting at naught this command?

Tobacco Column.

AFTER using tobacco in one form or another for 16 years, I came to the conclusion to stop and subscribe to GLEANINGS, which I did in April last. A few days since I got some bees; and now if you think I am entitled to a smoker, send it along; and if I ever use tobacco again, I will pay for a dozen smokers. **M. W. SHEPHERD.**
Wellington, O., Aug. 21, 1883.

As I have quit using tobacco, send me a smoker.
Boyce, La., July 27, 1883. **T. G. MORGAN.**

I have concluded to stop smoking; send me a smoker. If I break over I will send you the $1.00.
Meredith, Del. Co., N. Y., July 16. **O. R. MUNSON.**

I propose to quit the use of tobacco, and I want a smoker to bind the bargain; and if I commence again, I will pay for it. **A. L. MILLER.**
West Toledo, Ohio.

I am happy to say, that I may claim a smoker. I am now master of the weed. No more smoking or chewing for me. Should I ever fall by the way, I will sorrowfully pay for the smoker.
Geigerville, Ky. **J. W. JOHNSON.**

I see by GLEANINGS that you present a smoker to all who stop the use of tobacco. I stopped 3 months ago, after using it 6 years. If you think I am entitled to a smoker, send me one; and if I ever use tobacco again, I will pay for the smoker double.
Wellington, O., July 23, 1883. **L. O. DYER.**

I have quit using tobacco. Please send me a smoker. If I commence to use it again I will pay you for it; it was harder to stop than whisky, which I discontinued ten years ago. I like the spirit that breathes through your paper very much.
Owen Sound, Can. **DAVID WILLIAMS.**

Thank God, friend W., that you are rescued from the bottomless pit.

I see you are giving a smoker to all those who quit the use of tobacco, and promise never to use it again. I have quit the habit, and will never use it again while I live. Mail me the smoker; and if I ever use another bit I will pay you for half a dozen for somebody else. I have 14 stands of bees.
Bowman, Ga. **E. A. HENDRICK.**

We gladly send you a smoker, trusting that you will never use tobacco again.

KIND WORDS FROM OUR CUSTOMERS.

I find the little slates very handy.
Farmington, Tex. **MRS. LIZZIE A. RODGERS.**

The Parker machine works splendid. Sections fold nicely. **C. M. HICKS.**
Fairview, Md., May 30, 1883.

The 50 Clark smokers I bought of you last spring are all sold, and are giving good satisfaction.
LaGrange, Ind., Aug. 18, 1883. **G. K. HUBBARD.**

You will be pleased to learn that the two fdn. mills you sent us have gained prizes at shows for the work they do. **GEO. NEIGHBOUR & SONS.**
London, Eng., Aug. 9, 1883.

I had fourteen of your queens last season, and there was only one that produced hybrids.
WELLINGTON J. SAUNDERS.
Meaford, Ont., Can., July 2, 1883.

I am very much pleased with the iron-jacket cans. They answer the purpose to perfection.
Wheeling, W. Va., Aug., 1883. **WM. BITZER.**

I received the bees in good order, and am more than satisfied. They went to work right away.
ARTHUR SHOEMAKER.
Belvidere, N. J., July 20, 1883.

The planer arrived all right, and I like it very much. It does much better work than I thought it would. **F. B. CARR.**
Acushnet, Mass., June 4, 1883.

Extractor was received two days ago; put it to work immediately; it works well. I am very much pleased with it. Thanks for the promptness in sending it. **W. B. WELLS.**
Oxford, O., July 12, 1883.

Please send 50 of those cards which you send out free. We want them for our Sunday-school, which we have started in a little log school-house up here in the burnt country. Will try to put them where they will do good. **J. C. MERRIMAN.**
Deckerville, Mich., July 3, 1883.

The 10 smokers and foundation came to hand all right; sorry I did not give you an order for two or three times the amount. We shall want more after awhile to make a show at our fair, about last of August. Bees have been doing pretty well.
Knightstown, Ind., July 17, 1883. **J. C. DEEM.**

Friend Root, I wish to thank you for the kind way you have done business with me. You sent more in place of the bees lost than I expected or even thought you would, although I thought you would do all that was right. May the Lord prosper you in well doing, and help you on in the right way to the eternal city. **ELBERT A. BOYD.**
Cannonsville, N. Y., Aug. 2, 1883.

I don't think I can ever forget the favor, friend Root; for if you had not let me have the goods it would have been a tough job for me to have got my apiary started again without help. The Jones honey-pails, with the fancy labels, sell well at 20c for 1½-lb.; 35c for 2½-lb., and 65c for the 5 lb. The pails are weighed in with the honey. These are my prices by the quantity. **E. J. SCOFIELD.**
Hanover, Wis., Aug. 20, 1883.

APIS AMERICANA DISCOVERED AT LAST,

And in perfect development, especially the sting! I have been harvesting timothy for seed — and chaff to pack hives, *a la* Poppleton, and I have been chased a good share of the time, and stung a few times while binding on the machine. There was some red clover mixed with the timothy, and these were genuine red-clover bees. Among people who have never speculated on the "coming bee" (these were *coming*, for certain), they are called bumble-bees.
Howard Center, Ia. **BURDETT HASSETT.**

I received the bee materials all O. K., and am much pleased with the honey pails and tumblers. Honey put up in those neat and attractive packages, is always sure to bring the top price. And I will say, in regard to the labels, that they can not be excelled, and I was highly delighted with the assortment you sent me. There are a few enterprising and wide-awake apiarians in Chenango Co., and are all to be seen with a "broad smile" on their faces, because of the enormous honey-yield this season.
Sherburne, N. Y., Aug. 7, 1883. **C. A. FRASURE.**

CROSS BEES.

Yours received all right. Never be shy to send me a bill, if all is not clear; and if ever I have a little balance, never send it back, because I'm always wanting something. I have 5 black hives, and some of them are as wicked as sin. Their whole time seems to be taken up with looking for somebody to sting. I have had them 4 years; never an ounce of honey. I am tired of this kind of work. I want you to send me a $1.00 queen, and I will try to change things. I tried it two years ago, but no go. I had two from you; they were splendid; in fact, they were the best queens I ever saw, **N. ANSON,**
Cleveland, O., Sept. 5, 1883.

SENDING QUEENS TO FLORIDA.

I received the queen yesterday all O. K. I gave her a new house to live in, with three frames of hatching brood, without one old bee. This morning she has a family of 500 young bees; and in addition to all of this, this morning I shook off from two frames the bees from a queenless colony. It is now 8 o'clock; and every thing is lovely with the queen. She is walking around as proud as can be, with a train of bees following behind. She is rather dark, but I suppose you will vouch she is pure Italian. I want to Italianze my 60 colonies. The bees that came with the queen look well. Are they of her progeny? F. B. SACKETT.

Titusville, Fla., Aug. 4, 1883.

Now, friend Root, I have a great fault to find with you for cheating me so badly. I sent in June for a tested Italian queen, and now she has filled the hive of 9 frames full, and I started her on two frames, and don't you think I can handle them without smoke? and they are all so yellow that I need no artificial color for them. Now, if you "cheat" me again like this, I don't know but I shall tell every one who sees them where I got them. I shall take them to the State Fair; and then you will be exposed, of course. We talk about you a great deal now; and unless you conduct differently, I don't know how you will come out. I like an all-wood frame best, as they stay in place better when taking off cases or cloths. ELISHA P. CHURCHILL.

North Auburn, Me., Aug. 17, 1883.

A KIND WORD IN VERY TRUTH.

JUVENILE comes to us this month, in what—a new dress, or is it the old gown of its senior? Well, 'tis a great improvement over the old style, and is now of itself a first-class journal, and a wonder to all how two such journals as GLEANINGS and JUVENILE can be published for the small sum of one dollar a year. I must express my admiration and approval of the poem by Miss Lu, "The Early History and Life of GLEANINGS." 'Tis a just tribute to the founder of what is now a first-class bee journal, ranking in the very first rank with all the publications on bee culture in the known world. Long may GLEANINGS and JUVENILE live, and Novice and Lu be spared to watch over its destiny, and steer it clear of that rock, financial ruin, that has wrecked so many of its sister-ships! A. W. OSBURN.

Water Valley, N. Y., Aug. 30, 1883.

WHAT'S THE MATTER?

Infant GLEANINGS doesn't come for this month. I miss its prattle very much. What is the matter? "Has hers fall down and bumped hers head or sumfin else badder?" S. L. HASKIN.

Chandler's Valley, Pa., Aug. 20, 1883.

Friend H., none of those awful things have happened at all. I guess the only trouble is, you bee-folks have ordered so many labels to take care of the great crop of honey, that the printers have not had time to get the JUVENILE out on time. Besides she has grown larger, you know, and a little harder to manage. We hope to be able to get her in the new harness all right, however, and we trust she will make her appearance hereafter a little nearer on time. You see, if we do not pay any thing for the JUVENILE, she considers herself a privileged character, and takes a little more liberty in coming and going than her mother would think of doing.

I am a firm believer in the doctrine of compensation, even in the affairs of this world. Yesterday I took off a case of 28 sections, and did not have one empty one to replace them, and my bees hard at work; and to add to my dilemma, my Clark smoker, old style, collapsed—spring broke (a steel strap), and in getting to it I ruined the leather of the bellows. Well, in less than half an hour a message came from the depot that your last shipment had arrived. I felt grateful; and within two hours, over a hundred nice new white sections with good starters were on the hives. I had an old L. C. Root smoker, but I could not keep a fire in it, so I had a hard time, until I thought to send to Dr. Temple to borrow his until you could send me a couple. I tie my cases to hold sections with hard-spun white-flax twine, and find it preferable to wire. I never had any true conception of a "honey boom" until now this season. White clover, sourwood, corn, sumac, etc., are and have been booming. I have taken nearly 1700 lbs. of honey. In following your advice to *get ready*, I have my *reward* in a fine harvest of pure white honey. Goods all right and very satisfactory. L. M. SHUMAKER.

Danville, Va., July 20, 1883.

SHIPPING BEES TO CALIFORNIA.

I received the queen and bees Aug. 2 at 2 o'clock P.M. It appears you sent the queen and bees July 26, and notified me by card the same day. The bees came 3 days before your card. There were about 150 dead bees in the cage. The bees had more honey than they needed. The comb was in good order; and when I examined the card with wire in to keep it straight, and the care you had taken to pack, to come such a long road, I must say you understand your business. To-day I opened the hive for the first time, and the queen had improved, and is a beauty. The bees had greatly improved too, and are very nice large ones. I would not take ten dollars in gold for the queen. JACOB WOLFE.

Lathrop, Cal., Aug. 6, 1883.

The above were sent in a nucleus hive on a wired comb of new clover honey. And, by the way, if I can have such a comb of new honey, I do not know but I like it better than any thing else that can be devised for shipping bees long distances. The reason why I emphasize *new* honey is, when first brought in and stored in open cells it contains quite a quantity of water not yet evaporated; and this water is in just the right shape to sustain the bees in such a journey as they have in going to California, Texas, and other remote points.

SOME KIND WORDS VERY PLAINLY SPOKEN.

I do not claim any damages on hives, as the entire amount is but a trifle; but is it not for your interest to have every thing in good order, and as nearly right as possible? If I ask some foolish questions, do not be impatient, as I am inexperienced in this business. I like the A B C book very much, but would like to know which is right — the goods as they are sent out, or the book. I find one inch space in the hive after the 7 wide frames are in; the book says there should be but ¼ inch space after the frames are wedged. I find the boxes are not all of a width, but of several widths. The book says they should all be of one width. It also teaches absolute cleanliness, which I admire; but I found about one-half of the tin separators smeared with grease and dirt rubbed in so it was nearly impossible to clean them. Now, which of these were right? If I had any idea the book was wrong, I could have rubbed the others with grease and stove blacking with less trouble than cleaning them. I expect to order quite a lot of hives next winter, but would like to be started all right before that time. Would it not be a good idea to publish a revised edition of the book? or if the other things are wrong, revise *them*.

Bennington, Vt., Aug. 1, 1883. J. N. SCRANTON.

Friend S., perhaps some of the friends may think this letter does not belong here, but I think it does. I presume your wired frames had shrunk considerably. However, an inch will do no harm; and as bees would not be very likely to build a comb in an inch space, even that would be no material harm. The same is true in regard to sections. Last spring we were obliged to give you half-seasoned sections, or none at all; and as the edges of the boards would be seasoned much more than the middle, when they came to dry all together, these varying thicknesses would occur. I can not explain how the separators came to be greased, unless the oil from some of the machinery got dropped on them. It ought not to have been so, and I will willingly pay for the trouble of cleaning them up.— Friend S., it would be a good idea to have every thing in this world all right; but where so many people come to me to have me do so much for them, I tell you it is a pretty hard matter to send them all away well pleased. Thanks for your criticisms, given in such a vein of pleasantry.

Your 10-ct "speck" are just such as sell here in the stores for 75 cts., and they fit us exactly.

L. C. SEATON.

Ellensburg, Wash. Ter., Aug. 12, 1883.

I would not do without one of the smokers for five times the price of them.

S. S. LEACH.

Quincy, O., Aug. 13, 1883.

I have had Thursday, the 20th, called American visitor's day, in honor of our American visitors.

Beeton, Ont., Can. D. A. JONES.

Juvenile Gleanings.

SEPT. 15, 1883.

Contents of this Number.

Alley's Book.....566
Apiary, Whiteside.....561
Asters.....574
Basswood Aug. 15.....571
Bees to California.....581
Bees and Baby.....556
Bees Carrying Flowers.....569
Bees on Window.....570
Bees, Cross.....580
Bees in the Ear.....573
Bees, To Ship.....565
Bees in Oregon.....572
Bible Verses.....573
Blacks vs. Italians.....570
Capons.....569
Cat, Educated.....573
Chicken Cholera.....571
Composition on Bees.....574
Conventions.....584
Counter Store.....582
Day Star.....576
Ducks.....574
Eggs, Bees Removing.....565
Ernest's Notes.....566
Ext. from Brood-nest.....560
Fairies.....569
Frames, Fastening.....565
Goldenrod.....560
Goods that weren't There..567
Harnden's Report.....564
Harrison, Mrs.....557
Hive, Golden.....560
How did it Happen?.....558
Honey from Oak.....558
Honey from Cotton.....568
Honey Column.....583
Humbugs and Swindles.....583
Incubators.....571
Kind Words.....580
Labels for Comb Honey.....556
Lilacs.....567
Location, Choosing a.....570
Markets, Injuring.....556
Molasses of White Sugar...574
Money, Making.....563
My Neighbors.....553
Notes and Queries.....559
Orphan-boy.....562
Park's Report.....564
Partridges.....574
Paul Price.....562
Plantain.....569
Pond on the Sabbath.....565
Poplars.....570
Propolis for Sealing.....569
Queens, Dried.....570
Queens to Florida.....581
Remindery.....558
Reports Encouraging.....559
Sections, Close-topped.....565
Strawberries, 4000 Quarts...575
Swarm through a Swarm...575
Telegraphers.....575
Virgil.....554
Wax-plant.....569
White Pollen.....569

And the heavens shall praise thy wonders, O Lord.—Ps. 89:5.

WM. FULLER, whose name you find in another place, has sent us a very nice paper-holder, made of oiled walnut.

THE Nickel-Plate Railroad will issue round-trip tickets from Cleveland to Toronto, for $5.50; tickets good for eight days, commencing Sept. 17.

IN consequence of more changes of clerks, several advertisements were last month carelessly omitted. Among them was friend Alley's, which see in this number.

OUR label printer has just contrived an order-sheet for honey labels which he thinks will enable you to order labels with much less chance of making mistakes. It will be sent free with our label specimen-book on application.

IF, instead of having the orders crowded in on us next spring, you will send them in now, we will, until further notice, make a discount of 5 per cent on all goods purchased now to be used next season, *providing you make reference to this editorial when you make the order.*

SLICED SECTIONS VS. SAWED ONES.

WE saw some beautiful sections made by slicing up the wood from steamed pieces of plank, instead of sawing. The sections seemed every bit as nice as those sawed from plank, and quite a large part of the basswood may be saved by this method, as no sawdust comes out. There will be one great difficulty, however; the pieces must be dried after being steamed, or we shall have mildewed sections again; and the steaming and drying, I fear, would occupy more time than the lumber saved by sawing is worth. If we had a slicing-machine that would slice dry lumber, it might be a great saving.

TO-DAY is the 14th day of September, and I have just returned from a flying trip to the Tri-State Fair and the Toledo Convention. Although I stayed but a few hours, I had the pleasure of meeting friends Newman, Muth, E. E. Hasty, J. B. Mason, and a host of others, *including Mr. Forncrook.* The display of honey was most excellent, as was also the collection of implements for the apiary. I saw our good friend Vandervort turning his foundation mill, while Mr. Pelham was taking out the beautiful sheets. They were working together as pleasantly as a couple of brothers. I tell you, friends, it does our hearts good to see the kind feeling that exists among bee-men at our conventions, and that, too, when they are in the same line of business, and, in one sense, rivals for public favor. I wish the tradesmen of the world in general could take an example from them.

ON page 562 there is a suggestion that the bees that Samson found in the carcass of the lion might have been the work of spontaneous generation from the decaying flesh. I believe it is generally supposed the bees found a lodging-place in a partially decayed spot in the lion's body, which had dried up by the arid wind of that country until it was something like dried sole leather, and, in fact, was not a very bad place for a swarm to cluster beneath the ribs. May be they imagined the ribs were top-bars to movable-frame hives. In regard to Virgil's soaring imagination, I would suggest that he must have seen a swarm of bees passing over the carcass of some animal while it was infested with swarms of great blow flies, and that he somehow got the flies and bees confused together in his mind, and imagined they were generated from such a source. If friend Hasty does not like my explanation, will he please give a better one?

OUR NEW COUNTER STORE.

ELIZA is already installed in her new room, and the goods are scattered over the counters. The shelves are being loaded up day by day, and we are beginning to solve the problem as to whether the new store will hold the goods. One great trouble in filling orders during the past months was that few if any clerks in the establishment knew exactly where to find the right article. Now each article is to have a place of its own, and the place is to be large enough to hold a whole lot, even though it be a wagon-load. The name of the article, as well as when it was bought, and of whom, is to be written over it as a guide to the one who makes the orders, to know how much we shall probably need in a season. A few days ago a clerk wanted some two-quart pails. He first went into the counter store, and then upstairs, then down to the warehouse, then into the "dark-room," and lastly found them stacked up in the tin-shop. As we frequently buy a thousand of these pails at once, we had been obliged to put them in all of these places to find room for them. Now, then, friends, we have the room; and the building, so far as it has gone, is all paid for. I thank you for your past patronage, and I thank God for giving me health and strength to manage this great sea of business.

MANY of the mistakes and misunderstandings we have had during the past season have been caused by changing clerks. Some have been absent, on account of sickness; others on account of business changes and various other reasons; and the best we could do was to install others in their places as soon as we could. In fact, I began to think that there was no safe way, except to have two clerks for almost every department, so that one might take the work in the other's absence. The question comes to me often, and perhaps it does to some of you, as to whether I am really capable, after all, of managing a business extending and increasing in the way ours promises to do. In our new clerks' office, which is a room about 40 by 50, we are intending to have a separate desk for each kind of work, and each is to be provided with all the appliances that can be made use of to facilitate having one clerk take up the business of another without making blunders. That is, every thing will be mapped out so plainly that all the work the business demands will be easily understood and taken up. I have sometimes wondered, dear friends, if God were not trying to see how well I would manage after he had taken away one main prop after another. May it not be that he wishes me to become equal to the task of taking almost a new force of clerks, and still have every thing go on with order and system? I know I am a great way from it yet, and fear I am a dull pupil in some respects; but as long as the work is done for his honor and glory, I know he will help, for I have his written promise, "When thou passest through the waters, I will be with thee; and through the rivers, they shall not overflow thee."

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

CAN you give us any reliable information as to whether there is a real patent on the Mitchell & Buchanal bee-hive? Parties here are selling the rights, and also territory. Some of us think the *patent* a humbug. But these men claim you offered Mitchell a big sum for an interest in it, and, failing to get it, published it as a humbug. If it is a fraud, I want to know it, so as to expose it. Please drop me a card, and oblige. W. L. THURMAN.
Valley Creek, Texas, Sept. 10, 1883.

Friend T., we have never offered Mitchell, nor anybody else, a copper for any patent for any thing pertaining to bee culture; but we *have* showed up Mitchell and his work for the past four or five years, and we propose to keep doing so just as fast as he can find new localities to operate in, where GLEANINGS is not taken. We have published his patent-claim, and have explained that his patent was on an attachment to a division-board which he does not use *himself*, and the facts have been over and over again fully substantiated.

Black and Hybrid Queens For Sale.

Black queens, 25 c.; hybrids, 40 c.
Somerset, Ky., Sept. 5, 1883. J. H. COLVILLE.

I have 5 or 6 hybrid queens that I will sell for 20c each. E. H. COOK.
Andover, Conn., Sept. 10, 1883.

TO CLOSE OUT,

I offer a lot of nice, untested Italian queens at 75c each for one or more. J. P. MOORE,
Morgan, Pendleton Co., Ky.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CINCINNATI.—*Honey.*—The market for honey is very dull, and will remain so as long as our commission houses are so abundantly provided. The demand is slower than I have experienced for the last 3 years, at this season. Extracted honey brings 7@9 cts. on arrival. Comb honey, if choice and in sections, 14@15c. *Beeswax*, arrivals are good at 25c for clean yellow. CHAS. F. MUTH.
Cincinnati, O., Sept. 10, 1883.

CHICAGO.—*Honey.*—Demand for good consignments of honey has been better during the past week, and stocks have been materially reduced. Choice comb, in one-pound frames, well filled, 18c; in 1½ and 2 lb., 16@17c. One fancy lot sold at 19c. Extracted is in light request, and sales are few; prices asked are 8@10c for yellow and white clover. *Beeswax*, receipts light, and there is not much call at 25@35c. R. A. BURNETT.
161 South Water St., Chicago, Ill., Sept. 10, 1883.

CLEVELAND.—*Honey.*—Honey continues in good demand, and all lots of choice 1-lb. sections are sold on arrival at 18@19c; 2-lbs. not quite so ready sale at 17@18c. For extracted, there is but little call. *Beeswax*, 28@30c. A. C. KENDEL.
Cleveland, O., Sept. 8, 1883.

NEW YORK.—*Honey.*—A few small lots of new comb in our city so far, which are selling at 17@18c. Extracted, white, 9@10c. No arrivals of new buckwheat yet. *Beeswax*, a fair demand, and is held at 28@29c. H. K. & F. B. THURBER & CO.
New York, Sept. 10, 1883.

BOSTON.—*Honey.*—Best 1-lb. sections, 20c; 2-lb., 18 cts. Extracted, 8@9c. *Beeswax*, scarce.
Boston, Sept. 10, 1883. BLAKE & RIPLEY.

Wanted—A quantity of extracted white-clover or basswood honey, to be shipped in tin cans holding 100 lbs. each. Write me the best you can do.
Adrian, Len. Co., Mich. H. BARBER.

Wanted—1000 lbs. of extra white comb honey, 1-lb. boxes preferred. State price, delivered at Cleveland, Ohio. B. T. BLEASDALE.
Warrensville, Cuyahoga Co., Ohio.

I have 4000 lbs. light extracted honey in 200-lb. barrels; I will take 10 cts. per lb. on board of cars here.
North Freedom, Wis., Sept. 1, 1883. F. MINNICH.

10 Chaff Hives, $13.50

THE LAST TIME.

We have a small and choice lot of chaff hives (Root's style) that we will sell at the rate of ten for $13.50, or five for $7.00. We would prefer not to sell in lots less than five, but will do so at $1.75 each. These are good hives, provided with tin roofs and rabbets, and we will *positively* sell at such low rates no longer than this fall. We can not do it. Send your order at once, and it will be filled promptly.

S. C. & J. P. WATTS,
MURRAY, - CLEARFIELD CO., - PA.

WE will pay 10c each for the following numbers: January JUVENILE, February GLEANINGS and JUVENILE, 1883, and February GLEANINGS, 1882.
A. I. ROOT, Medina, Ohio.

CONVENTION NOTICES.

CANADA'S BIG FAIR, AND OUR CONVENTION.

THE attractions at this great fair, opening Sept. 10, and closing on the 22d, are so great that our space is utterly inadequate to enable us to reprint the programme for each day. But on the 18th we notice the following :

The Beckwith Family perform in a large glass tank; electric-railway trips ; textile workers ; gas vs. electricity ; Prof. Hand, the great pyrotechnist, will descend from the main building in his "chariot of fire."

On the 19th, Farmers' Day is observed; horseback riding ; balloon ascension ; organ and piano recitals.

The 20th is known as "American Visitors' Day." Many of the attractions of the other days will be repeated, besides a grand review of all prize animals.

The whole affair promises to be a "big thing," and will doubtless well repay a visit. Seldom if ever will a better opportunity be afforded for the bee-keepers of the United States and Canada to "look each other in the face" than on this occasion.

In addition to what we published in our last issue relative to special excursion rates, we append the following, which is the latest we have received up to noon, Sept. 12.

FARES.

Friend Root:—I understand we can go from Lewiston, N. Y. (5 miles from Suspension Bridge), to Toronto and return for $1 00. This will be the route taken by nearly all east and west, going via Suspension Bridge, as it gives a delightful ride down Niagara River and across the lake. GEO. W. HOUSE.

Fayetteville, N. Y., Aug. 29, 1883.

I have been to the Grand Trunk Railroad office, and had a talk about the Bee-Keepers' Convention at Toronto, Ont. They will give an excursion from Detroit to Toronto on the 17th of this month; the fare very likely will be $5.75 for the round trip.

Detroit, Mich., Sept. 7, 1883. OTTO KLEINOW.

The trains leave Suspension Bridge for Lewiston, where connection is made with boat for Toronto, as follows: 7 and 9 o'clock A.M., 5 and 7.15 P.M. Steamer arrives from Toronto at Lewiston 10.30 A.M. and 5 30 P.M. I send this, thinking perhaps it may be beneficial for those wishing to stop at Niagara a short time. GEO. W. HOUSE.

Fayetteville, N. Y., Sept. 2, 1883.

BEE MEETING.

The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, on the first Saturday of November, 1883.

E. W. TURNER, *Sec.*

WANTED !

200 Swarms Italian Bees. Parties desiring Bees wintered safely in Florida, and returned next May or June, with half the increase (they swarm there in March) will do well to correspond with

T. GRAHAM ASHMEAD,
9½d Williamson, Wayne Co., N. Y.

The best of References.

THE
British Bee Journal.

The British Bee Journal is now mailed to our address in packages, semi-monthly. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan., 1883. Will guarantee safe arrival of every number.

A. I. ROOT, Medina, Ohio.

Parlor Organs !

Having contracted for quite a number of Parlor Organs, in order to sell some of them immediately I offer them to my brother bee-keepers at the ordinary wholesale price to dealers. I will send prices and catalogues to any who intend purchasing. Prices range from $50 for a plain-case, 6-stop Organ, to $125 for the finest possible case and 12-stop organ. The order with the money is to be sent to A. I. Root, Medina, O.; and if the Organ doesn't suit, you may return the same and get your money back from Mr. Root, after 14 days of trial in your own house. In this way I think nobody will run any risk.

M. R. KUEHNE, Dealer in Organs,
9½ CAIRO, ILL.

EXCHANGE.—Plymouth Rocks and Brown Leghorns for Italian or Cyprian bees. Address T. G. ASHMEAD, Williamson, Wayne Co., N. Y.

Isn't it Pretty !
That is Nice! Neat! Handy!

Is what people say of a wooden article that I will send you by mail postpaid for 70 cts. Have been selling them at $1.00 each. I wish to show you how you can make some money at home.

9½c WM. FULLER, Woodville, Wis.

Recent Additions to the
COUNTER STORE.

THREE-CENT COUNTER.

Postage.		Pr. of 10,	of 100
3	MARKING-GAUGE, for carpenters' use	25	2 25
2	POTATO-PARER; a knife that will shut up	25	2 25

FIVE-CENT COUNTER.

Postage.		Pr. of 10,	of 100
4	SINK-CLEANER This is a pretty little shovel with a rubber edge, and nice for many purposes.	45	4 00
5	TIN BASIN, 1 qt., retinned As bright as silver, and a very useful size.	45	4 00

TEN-CENT COUNTER.

Postage.		Pr. of 10,	of 100
7	LUMINOUS MATCH-SAFE A very pretty ornament by daylight, and in the night shows in figures of fire, large and plain, "Matches."	85	8 00
5	MUGS for children These are decorated with fables, and lettered for the little ones.	85	7 50
8	MUSTARD-POT, China A very pretty utensil, with a mustard-spoon also China.	85	8 00
3	NAPKIN-RING on stand, jet, enameled A very pretty design.	75	7 00

FIFTEEN-CENT COUNTER.

Postage.		Pr. of 10,	of 100
10	HEARTH-BROOM Just the thing for little girls. It is a neat, strong, well-made broom, only made small size. Just right for the "small housekeeper.	1 25	12 00

Twenty-Five Cent Counter.

Postage.		Pr. of 10,	of 100
	HONEY-PITCHER This is a beautiful piece of glassware, and has a britannia automatic cover which keeps the pitcher always closed when standing on the table, but opens the minute you tip the pitcher to pour.	2 25	20 00

Thirty-Five Cent Counter.

Postage.		Pr. of 10,	of 100
10	CRUMB AND BRUSH TRAY A useful adjunct of the dinner-table.	3 00	27 50

FIFTY-CENT COUNTER.

Postage.		Pr. of 10,	of 100
7	HAMMOCK for children Made of strong cords of variegated colors.	4 50	42 50
22	RIVETING HAMMER for tinners, blacksmiths, or machinists	4 00	35 00

SEVENTY-FIVE CENT COUNTER.

Postage.		Pr. of 10,	of 100
17	HAMMOCK, stout, and exceedingly well made for the money	6 50	60 00

One-Dollar Counter.

Postage.		Pr. of 10,	of 100
22	HAMMOCK, like those for 75c, but stronger and better made	8 50	75 00

TWO-DOLLAR COUNTER.

Postage.		Pr. of 10,	of 100
25	LUMINOUS CLOCK The dial shines in the dark, like the luminous match-safes. No need to strike a match when you go home late at night.	17 50	150 00

A. I. ROOT, MEDINA, OHIO.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany..................—
Bee Entomology.............—
Blasted Hopes...............617
Editorials.....................618
Forgettery......................—
Heads of Grain..............608
Ladies' Department ....—
Obituary.......................619
Smilery..........................—
The Growlery...............616
Honey Column..............590
Notes and Queries..........618

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Apiary, Help in..............600
Ash, Prickly..................611
Banner Apiary...............591
Baskets.........................601
Basswood in South..........611
Bees that won't raise Q., ..610
Bees that won't fight.......608
Bees, moving North........609
Bees on top-bars............609
Bottom Lands for Forage..611
Canning in glass............612
Cannibals, Are Bees?.......607
Cells, Royal, Dest. of.......598
Conventions 619
Corn Honey...................612
Dodder Plant.................604
Drones, Rearing.............612
Drones, Artificial 602
Extractor, Need of..........601
Flight of Bees................610
Florida 600
Grapevines for Shade.......612
Groveside Apiary...........601
Harrison, Mrs................605
Hiving-Boxes.................601
Hive-Carrier 607
King-birds 609
Langstroth's article........613
Maple Sugar for Spring feed596
Mats with wire..............600
Michigan State Fair........603
New Zealand.................602
North Carolina..............605
Patent Rights........600, 613-614
Pollen, Excess of............601
Queens Airing...............598
Queens Across the Atlantic 599
Queens near Entrance......610
Queens, Wed. Flights.......598
Queen in a hive cont. Q.....598
Queens not allowed to lay..609
Queens, Two in Hive........612
Queen-cells with laying Q. 613
Qu'n-rear'g, with old Q.c'gd.598
Queen-Rearing..............602
Queen-cells, Inserting......602
Roanoke Apiary.............612
Sections, To get out.........611
Sections, Bad................600
Sections during Honey-flow 611
Shumaker's Letter..........600
Skunks 608
Starters, To put in..........600
Stephenson's Observations.598
Sumac 608
Summit Apiary..............612
Sunshine and Honey........611
Sw'g without Clustering...613
Swarms, Holding by Brood.609
Toronto Convention........592
The Old Way and the New..596
Vent. for Comb Honey......601
West Virginia................610
Wilkin's Apiary.............606
Wintering, Outdoor........597
Workers, Fertile.............609

20 COLONIES OF BEES.

Mixed Italians and hybrids; part with Italian queens; in one-story Simplicity or 1½-story Langstroth hives; 8 frames of comb; division-board; cloth; say about 15 lbs. each of honey or granulated-sugar feed; all with more or less brood. Will place on the cars at Newark for $6.00 per colony.

Address W. EARLE CASS,
NO. 2 SUMMER PLACE,
10d NEWARK, N. J.

50 STRONG COLONIES of Brown Hybrid Bees in new 2-story L. Merrit Hives; combs built last year. Single col., $7; in lots of six, $6.50, or $300 for the lot. Would take young team as part pay. Safe arrival guaranteed. H. O. McELHANY, Brandon, Iowa.

216 COLONIES OF BEES
FOR SALE!

A chance to get a first-class apiary South at a bargain. ANTHONY OPP,
10tfd Helena, Phillips Co., Ark.

GREAT REDUCTION!
FOR THE NEXT 60 DAYS

I will sell the U. S. Standard Honey-Extractor at about 15% off the list price. ☞Send for my new Price List. G. W. STANLEY, Wyoming, N. Y.

WE will pay 10c. each for the following: January GLEANINGS, and May JUVENILE.
A. I. ROOT, Medina, Ohio.

PLYMOUTH ROCKS & BROWN LEGHORNS. *Superior stock. Prices reasonable.* Address,
T. S. ASHMEAD, Williamson, Wayne Co., N. Y.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2.00 per year.

Those whose names appear below agree to furnish Italian queens for $1.00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 10tf
*Paul L. Viallon, Bayou Goula, La. 10tfd
*S. F. Newman, Norwalk, Huron Co., O. 10tfd
*Wm. Ballantine. Sago, Musk. Co., O. 10tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2 7tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
*Jas. O. Facey. New Hamburg, Ont., Can. 10tfd
*J. H. Reed, Orleans, Orange Co., Ind. 10tfd
*Oliver Hoover, Clyde, Sandusky Co., O, 5-10
*Ila Michener, Low Banks, Ont., Can. 5-10
*D. G. Edmiston, Adrian, Len. Co., Mich. 8tfd
*F. G. Cartland, High Point, Guilford Co., N.C. 10tfd
*Jas. A. Nelson, L. box 83, Wyandott, Wy. Co., Kan. 6-5
*Wm. K. Deisher, Kutztown, Berks Co., Pa. 8-10
*James P. Sterritt, Sheakleyville, Mercer Co., Pa. 10-3

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 10tfd
L. E. Mercer, Lenox, Taylor Co., Iowa. 4-3

FOR SALE!
52 Strong Colonies of Italian, Holy-Land and Hybrid Bees.

In 1½ and 2 story hives, with surplus arrangement. I will take $400. For particulars, address
H. J. SCHRECK,
10 Goshen, Elkhart Co., Ind.

Back Numbers of "Gleanings,"

Full and complete, and in good order. Vols. for the year 1878, 1879, 1880, 1881, 1882, 1883, nearly complete. Will sell or exchange any or all of them for bees, books, or any thing useful in the apiary; also
HISTORY OF FREE-MASONRY,
and Digest. By J. W. S. Mitchel, M. D. Ninth Edition, 2 large Vols., handsomly bound in Morocco; Gilt backs, sides, and edges; cost $18. Will sell for $10, or exchange for Chambers' Encyclopedia, bees, or offers. *Speak Quick.* Address,
10d L. A. DOSCH, Miamisburg, Mont. Co., Ohio.

Strawberry and Raspberry Plants of best old and new varieties. Fall is the time to plant. Send for circular to N. WHINERY & SON,
10 WINONA, COL. CO., OHIO.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. It near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

NEW YORK.—Our market is moderately active for honey. The fall movement thus far, however, is not equal to the corresponding date last year. The warm spell of recent date had a tendency to deter large buyers from placing orders. With cooler weather we look forward to a more active market. We are well informed that white honey will be more plentiful, and a lower price than last year is apprehended. While the buckwheat crop is lighter than last year, full prices are obtainable. We quote prices obtainable for all grades as follows: Fancy white clover honey in 1-lb. sections, no glass, 20@21c; fair, 18@19c; fancy, in 2-lb. sections, glassed, 17½@18c; fair, glassed, 15½@16c; fancy buckwheat, 1-lb., no glass, 15@16c; 2-lbs., glassed, 14c; ordinary bkwt, in 1 and 2-lb. sections, 1c less. Extracted, white clover, in kegs or small bbls, per lb., 10@11c; buckwheat, 8@8½c. Beeswax: The market is firm; prime yellow is worth 30@32c. McCAUL & HILDRETH.
80 Hudson St., N. Y., Sept. 27, 1883.

CHICAGO.—The demand has been up to the average during this month for other years, with perhaps a better feeling on the part of purchasers that, for the present, the market would not be any lower. I quote comb honey, one-pound frames, well filled and white, 18c.; 1½ to 2 ℔. frames, 15@17c. Dark comb, offerings light, but really no demand for what there is. Extracted honey does not move with any freedom; consumers and dealers confine themselves to their immediate wants. Pure clover, of heavy body, brings 10c.; not quite so good, 9c. Beeswax, 25@35c.
Chicago, Sept. 24, 1883. R. A. BURNETT.

MILWAUKEE.—Honey market here is very steady and the receipts of choice 1-℔. sections barely enough to supply the demand, and salable at 17@18c.; extracted, slow sale. Choice white in small packages, 10@11c. Mixed and dark, 9½@10c. Beeswax quotable at 25@30c. per ℔. A. V. BISHOP.
Milwaukee, Sept. 21, 1883.

CLEVELAND.—Honey continues in good demand, and is readily placed as it arrives at 18@19c. for best 1-℔. white, and 17@18 for 2-℔. Second quality and old, sells slowly at 15@16. A. C. KENDEL.
Cleveland, O., Sept. 21, 1883.

NEW YORK.—Comb honey is plentiful this year. We are now receiving some very fine quality, and shall soon have a full supply of all grades and styles. We quote: Fancy white-clover, 2-℔. sec., 19c.; in 1-℔. sec., 20c.; in 1-℔. sections, paper boxes, 21c. Fair clover, 2-℔. sec., 16c.; 1-℔. sec., 17c. Buckwheat and dark, in 2-℔. sec., 14c.; 1-℔. sec., 15c. White clover in bulk is selling at 9@10c. on arrival. Market in beeswax is dull, and demand light. It is held at 27@29c., according to quality.
H. K. & F. B. THURBER & CO.
New York, Sept. 22, 1883.

ST. LOUIS.—None save small sales reported; plenty offering and little demand. We quote: strained and extracted at 6½@7c.; Comb at 14@16c. Beeswax readily salable at 26c. for prime.
W. T. ANDERSON & CO.
St. Louis, Sept. 22, 1883.

BOSTON.—No change. Best white 1-℔. sections 18@20c.; 2-℔s. 18c.; extracted, 8@10c.
BLAKE & RIPLEY.
Boston, Sept. 25, 1883.

I have about 150 ℔s. of basswood honey yet to sell. It is in a nice, waxed 20-gal. oak cask. The honey was mostly sealed before extracting, hence is thick and nice. W. H. UPTON.
Loveland, Iowa.

WANTED.—500 to 2000 ℔s. comb honey in one-pound sections; must be first-class. State cash price and amounts. GEO. W. LAWSON.
Centreville, Montgomery Co., Ohio.

WANTED.—a few barrels of white-clover and basswood honey. State lowest price, delivered.
Springbow, Crawford Co., Pa. CHAS. OLIVER.

We have 4000 lbs. linn and white-clover honey in kegs holding 200 lbs. each, for which we will take 10 cts. per lb., deliverd on board the cars here.
Union City, Ind. ROE BROS.

I want to buy 1000 lbs. nice white-clover comb honey, 1-lb. sections, for which I will pay 17 cts. per lb., delivered here. GEO. F. WILLIAMS.
New Philadelphia, O.

I wish to buy a few thousand pounds of comb and extracted honey. Parties having honey to sell will write me giving particulars as to style of package, and lowest price. J. A. BUCHANAN.
Holliday's Cove, W. Va.

I have 2500 lbs. of white-clover and basswood honey, in barrels, for which I will take 11 cents per lb.
Stayner, Ont., Can. B. STONE.

CONVENTION NOTICES.

BEE MEETING.

The next regular meeting of the Mahoning Valley Bee-Keepers' Association will be held at Newton Falls, on the first Saturday of November, 1883.
E. W. TURNER, *Sec.*

The Fall meeting of the New Jersey and Eastern Bee-Keepers Association will be in New York City, at the Cooper Union, on Wednesday, Nov. 7, 1883.
Bound Brook, N. J. J. HASBROUCK, *Sec.*

The annual meeting of the Michigan State Bee-Keepers' Association will be held at Flint, Dec. 5 and 6, 1883. All are invited.
Prof. A. J. COOK, *President.*
H. D. CUTTING, *Sec'y.*

The Iowa Central Bee-Keepers' Association will hold their regular annual meeting on Friday, Nov. 2, 1883, at the Court-house in Winterset, Madison Co., Iowa. All bee-keepers are cordially invited to attend, and let us make this one of the best ever held in the State. J. E. PRYOR, *Sec'y.*
Arbor Hill, Ia.

The next quarterly meeting of the Central Ill. Bee-Keepers' Association will be held in Bloomington on Wednesday, Oct. 10. at 10 A. M. All interested in this and adjoining counties are invited to attend.
J. L. WOLCOTT, *Pres.*
JAMES POINDEXTER, *Sec.*

The next meeting of the Tuscarawas Valley Bee-Keepers' Convention will be in Newcomerstown, on Wednesday Sept. 26th 1883. We are endevoring to make our meetings of interest to all apiarians, and, by so doing, to increase the interest in bee-keeping in the country. J. A. BUCKLEY, *Pres't.*
H. DENMAN. *Sec'y.*

NORTHWESTERN CONVENTION.

The Northwestern Bee-Keepers' Association will hold its fourth annual convention at Owsley's Hall, N. W. corner Roby and West Madison Sts., Chicago, Ill., on Wednesday and Thursday, October 17 and 18, 1883, commencing at 10 A.M. on Wednesday, and holding five sessions.

The Rev. L. L. Langstroth (the father of American apiculture) has promised to be present, and many of the most prominent apiarists of the Northwest will be there and aid in the deliberations and discussions.

This meeting will be held during the last week of the Inter-State Industrial Exposition, and reduced railroad fares may be had on nearly all the railroads. A cordial invitation is extended to bee-keepers everywhere to attend this annual reunion.

Meals may be obtained at the restaurant near the hall at 25 cents each.

Beds may be secured at the Gault House for $1, or at other hotels at regular rates.
C. C. MILLER, *President.*
THOS. G. NEWMAN, *Secretary.*

GLEANINGS
IN
BEE CULTURE.
DEVOTED TO BEES HONEY & HOME INTERESTS
F. A. Whiting

Vol. XI. OCT. 1, 1883. No. 10.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00, 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

Established in 1873.
PUBLISHED MONTHLY BY
A. I. ROOT, MEDINA, OHIO.

Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18c per year extra. To all countries NOT of the U. P. U., 42c per year extra.

NOTES FROM THE BANNER APIARY.

No. 47.

FRIEND ROOT:—You think I was a little vehement last month. Well, for a long time nothing had been said against metal-cornered frames, and I thought it about time something was said, and said vehemently too. To the charge that I am sometimes just a trifle vehement, I will plead guilty; but not so in regard to being too intolerant of the opinions of others. I *do* respect the opinions of others, and most especially do I respect them when they are supported by good reasons. You think my remarks about metal corners will bring in a shower of protests. I presume they will. Now, if any of the protests are accompanied by *reasons*, please give us the reasons, and let the protests go —into the waste-basket. You say that you think I will change my opinions considerably in the next ten years. I *hope* I shall; there would not be much progression if opinions never changed. I have changed them considerably in the past seven years; but more, perhaps, in the past year than in the preceding six years, and I attribute the rapid change of the past year to the fact that I have, during that time, visited and mingled more freely with other bee-keepers; in fact, have been influenced by the opinions and *reasons* of others, and might write quite an article upon the

CONCLUSIONS OF THE SEASON.

I once thought the American frame as good as any other (and for the purposes for which I used it, that of raising queens and extracted honey, I still think so); but for raising comb honey, I now consider a shallow frame preferable; and as the Langstroth frame is *very* much used, and is a shallow frame, I have changed to that. With a shallow frame there is more room for boxes over the brood; the bees enter and work more readily in the boxes, and the complicated side boxes, with their time-taking manipulations, are avoided.

I have made money rearing dollar queens; but although the present season has been a very poor one, I have come to the conclusion that, for me, there is more money in raising comb honey. I probably shall not drop queen-rearing entirely, but will continue it to this extent: When a colony having a good queen swarms, I shall wait six or seven days, and then cut out all except one or two cells. These cells will be kept in the lamp nursery until they hatch, when they will be intoduced to nuclei.

Another conclusion at which I have arrived this season is, that, for the production of comb honey, pure Italians are *not* the most desirable. They do not enter the boxes so readily as the blacks or hybrids; do not build so straight nor so white combs, and are much more liable to crowd the brood-nest with honey, and to build brace-combs between the sections. They are also more inclined to swarm. In a poor season the Italians will gather more honey than the blacks, and are more agreeable to handle; and, taken all in all, for all purposes the Italians are to be preferred; but the producer of comb honey, who ignores the above-mentioned good qualities of the German bee, does so at a loss. I think it is better not to ignore the good qualities of *either* variety, but do as friend Heddon has done — combine them. So well satisfied am I of the superiority of a combination of the dark leather-colored Italians and the brown German varieties, that I have bought queens of friend Heddon, and introduced them to full colonies, and reared queens from a tested queen obtained from him, and introduced them to other full colonies. I have also obtained a few queens of the Arkansas brown variety frm Geo. B. Peters, and shall probably commence another season with few, if any, pure Italians in my yard. I had, perhaps, a dozen colonies of hybrids this season, and the work that they did will certainly bear me out in drawing the above conclusions. For fear that some may think that my having hybrids in my yard was not justice to queen-buying customers, I will say that, by the use of fdn., the production of drones was controlled. Another season, comb honey will be my specialty; and if any one wants queens of the Heddon strains I can supply them. In taking this position in regard to the best bees, I expect that friend Heddon and myself, and perhaps a few hundred others, will stand alone; but if, by taking this position, we get comb honey by the carload, I think we can afford to "stand alone."

VISIT FROM ERNEST R. ROOT.

Two or three weeks ago I was sitting upon one end of the work-bench writing, when a young man stepped in at the door and asked if this was "Mr. Hutchinson, 'W. Z.'" I replied, "Yes, sir." The stranger said, "My name is Root;" and as I looked at him inquiringly he said, "Ernest." The pen was laid down and his hand was grasped; and as he had had a tramp of about 8 miles, not having come on the regular train, we sat down and chatted an hour or two, and then went out and caged queens, and introduced virgin queens, and "talked." In the evening, Ernest and my brother and myself held one of those *un*conventional conventions, and we showed Ernest the "fixings" that I was getting ready for the State Fair. The next morning friend E. went on to the north-west. He was swinging around quite a large "circle," visiting bee-keepers. Friend Root, if I am any judge, you have, in Ernest, a good son — one who will be generally liked and respected.

OFF FOR THE STATE FAIR.

Yesterday morning, half a carload of bees, honey, bee-keeping implements, etc., were started on their way to our State Fair at Detroit, and to-morrow morning I shall start. If I have time, and I will try to, I will send you a short description of the bee-keeping part of the Fair, in time for the Oct. No.

W. Z. HUTCHINSON.

Rogersville, Gen. Co., Mich., Sept. 13, 1883.

Friend H., the great reason why we prefer metal corners is, that they make the combs movable, and it seems to me a movable comb was really never movable until metal corners were put on them. You object to their being so very movable, I know; but we want every comb in every hive so it can be picked up with one hand, if need be, without any jar or snapping, or without being obliged to use the screw-driver, or lever of any kind. Again, our metal-cornered frames weigh, on an average, about 4 ounces, whereas some of your old wooden frames weigh pretty nearly a pound; and even then they are not so stiff and true as our wired metal-cornered frames. It would seem almost like box hives to think of going back to the old way. Whenever we want frames fixed in their places, we do it by spacing-boards. But I would by no means think of having all my frames stick in their places, just because, when a hive is to be moved about, we want the frames immovable. It has been objected, that the metal frames cut the fingers. We have never experienced much if any trouble of that kind; but perhaps it is because we do not handle large crops of honey. We are now considering a plan for obviating this difficulty. — It seems you have also decided to drop queen-rearing, and, if I am correct, you rather take exception to pure Italians. I should think, old friend, you had been visiting around lately. May an old friend caution you about being hasty, and taking up many new departures? — Thank you for your kind words in regard to Ernest. — Judging from your report in this number, it seems no one can any more say that W. Z. Hutchinson, who occupies the first place on the pages of GLEANINGS has never yet raised a crop of honey. I am very glad indeed you have succeeded so well, even if you have seen fit to change your views on several things.

THE CONVENTION IN TORONTO.

THIRTEENTH CONVENTION OF THE NORTH-AMERICAN BEE-KEEPERS' ASSOCIATION.

ON Sept. 17th I started for the meeting in Canada. I went by the way of the Nickel-Plate Railway, getting an excursion ticket from Cleveland to Toronto and back for the small sum of $5.50. The regular fare would have been $17.00. It is an excellent idea to have our conventions, and especially our national conventions, held at such a time and place that the bee-friends of America can take advantage of these low rates of travel. Our trip on the Nickel-Plate was more pleasant on account of the presence of the gentlemanly manager, Mr. Pate, who attended us the whole way, made arrangements for our hotel lodgings, took us to the right boat, and made himself a general father to the many who, like myself, were comparatively unused to travel. The Nickel-Plate is a beautiful new road; and when I expressed my surprise to him that our cars moved with so little noise, he explained to me that we were traveling on car-wheels made of paper! if they can make the wheels for railway trains of paper, why can we not have paper bee-hives? I presume we might do so without any trouble; but the chief obstacle in the way now is the expense compared with our modern wooden hives. When we arrived in Buffalo, our manager took us to a very pleasant and comfortable hotel. After supper I began to wonder whether this hotel, too, had a bar somewhere behind the scenes. In truth it did, and I remained in the room much of the evening, just to study human nature — especially human nature as we find it in beer-saloons. I must confess, friends, that when I went to bed at 9 o'clock I could not help a sort of feeling that it would be in some respects a little hard to close up such a place as this. The man who stood behind the bar seemed full of the milk of human kindness, and it was hard to imagine that he would harm any one. His customers seemed pleasant, well-to-do people, about of the same class as I used to be when I used to take a glass of beer of an evening with a friend or two. This second amendment, you know, must cut off this luxury, as many doubtless esteem it, from all such places as this. Well, you know I usually get up about 5 o'clock in the morning; but in consequence of change in the time in Buffalo, I arose about half-past 4 o'clock; and as no one seemed moving, I thought I would take a look in there. What do you think I saw? A room full of ragged, dissolute, besotted-looking human beings, stupefied with beer or something worse, and a perfect jargon of low-lived and filthy oaths and curses. One man, as he called his comrades to drink, spoke of his wife and children at home, and about his own blasted and sin-cursed life; with a sort of maudlin leer he made light of it all, and condemned himself and all present to the bottomless pit, and so it went on. The man behind the counter had lost his cheerful, kind look of the day before, and acted and spoke as if he were tired of life, and all that life could furnish. I went out into the open air, and drew a breath of relief, and declared to myself that I would never more be deceived by the mirrors and silver-plate and cut-glass furniture, even though accompanied with gentlemanly manners and a thin outside show.

That day, a little before noon, by standing on the platform of the car I caught a glimpse of Niagara Falls. To tell the truth, I was a little disappointed. It was a little strange, it is true, to see that great swift river, a little more than half a mile wide, tumbling over a precipice; but the feeling was a little like that of the Irishman who replied, when his attention was called to it, "Well, but what is to hinder its 'rowling'?" You see, it looks so natural to see it tumble when it comes to the tumbling-off place, that it was not so very surprising. More of this anon. When I next stepped off, at the steamboat-landing, I saw waving in the breeze, for the first time in my life, a strange flag, and I realized that I was really and truly for once outside of the fostering care of the stars and stripes. I confess I felt a little bad and homesick; but when I expressed something of my feeling to a bystander, he pointed across the bay, where, sure enough, the old flag waved. The two flags were not very far away. I wonder how it is with the two peoples. What sort of friends are these Canadians, anyhow? There is one good thing about them, certainly. They raise lots of peaches. The platform in front of the steamboat was literally covered with baskets of the most beautiful large yellow fruit, with ruddy cheeks, that it was ever my fortune to behold. Not even at our fairs had I ever seen such a display of peaches. It took the steamer an hour to load them on. Somebody said there were 15,000 baskets, unless I have made a big mistake. It may be I have. But there were a great many indeed. In a couple of hours more the great city of Toronto was before us. In the foreground we had Hanlan's Island, named after the great English oarsman, who, it is said, has outstripped both England and America in his especial calling. The island is a most beautiful piece of verdure. The buildings and shrubbery are beautifully arranged; and when a bystander explained to me that it was the playground of the great city of Toronto, I could readily understand why it was so nicely kept. The finest building on the island belongs to Hanlan; and although it was originally intended for a large hotel and beer-saloon, I was told that the Canadian people had become so aroused up in the matter of temperance, that for two years prohibition had been successfully maintained on this island. The Canadians seem to be proud of the fact; and where heretofore had been such a scene of drunkenness and debauchery, now not even a glass of beer can be had. Parents can let their children attend a picnic over on the island, without fear of any of the consequences that inevitably follow beer-saloons and beer-gardens.

Our good friend C. F. Muth was down at the boat, looking for bee-friends; but as he is a very large man, and I am quite a small one, he did not see me, and I did not see him, and so I made my way to the exhibition grounds. I very soon blundered on to the apiarian building. It would hardly be proper to call it a hall, for it is so large; in fact, it was about as large as the "Floral Hall" building to many of our county fairs. I very innocently stepped inside; but the pyramids upon pyramids, and tier upon tier of boxes of both extracted and comb honey, towering clear to the lofty rafters, caused me to open my eyes (and my mouth too, I fear) in mute wonder. What did it mean? I was not prepared to believe that old Mother Earth could produce such a spectacle as this. I soon got my tongue, and began to talk; and when they found out that it was Novice in veritable flesh and blood, I soon found a warm welcome awaiting me. The association in the city was telephoned; and while I waited orders, I had a lively chat with some of the Canadian bee-keepers—strong, sturdy, vivacious, cheerful, funny fellows I found them, and I very soon began wondering whether our stars and stripes would not be largely benefited by having the Union Jack still a little closer to her side. There was one man in the hall, with a most magnificent show of comb honey, whom I shall long remember for his quaint mirth and wit, and the provincial brogue that distinguishes most Canadians from United States people, that gave an added charm to his conversation. Although I spent only half an hour with him, I felt almost lonesome when I left him to go to the convention. My wife was born on the shores of "Merry England," as you may know; and how I did wish she could have been with me, and heard my good friend J. B. Hall talk, for that was his name.

When I made my appearance at the convention, some meddlesome body called right out, in the midst of proceedings, that A. I. Root had got away from the "Home of the Honey-Bees," and was there in the convention. They made so much noise, that for a while I felt a little foolish, and did not know where to go, or what to do. I was very soon warmly received among their number, and at the first intermission I received such an enthusiastic welcome that my poor right hand has hardly got over it yet. Of course, I began to look around me; for it has always been one of my peculiarities to want to know where I am, and to see what every thing looks like. Very likely our blue-eyed baby at home came very naturally by his disposition to twist his head and roll his eyes in every conceivable direction to see what is going on, and what there is new under the sun. I very soon got my eyes on a full-length life-size portrait of a beautiful woman standing at the head of the room in which we were congregated. A beautiful woman is always a nice thing to have around. But, why did these Canadian people have one in such a conspicuous place as this, in one of their public buildings? Pretty soon it slowly dawned upon my understanding, and I said to myself, "Why, you blessed piece of old stupidity! can't you scrape up sense enough yet to know that that 'woman' is none other than Queen Victoria?"

Before we left, I found my eyes wandering toward her as the convention progressed, and caught myself saying, mentally, a great many times, "God save the Queen!" The room they had given us was none other than the council chamber of the city of Toronto. It was furnished free of charge,—gas-lights, janitor, and all,—and, what is still more, His Honor the Mayor of Toronto came before us and gave us a short address of welcome. Well, I tell you, friends, somehow it made the whole thing pass off very pleasantly. After one of the sturdy sons of Canada, Mr. McKnight, had stood up and given us a little speech of welcome, I began to feel that I really loved old England and all her sons. I need not mention her daughters here, because I commenced loving one of them a great many years ago; and as the investment has turned out well, I do not believe I am going to stop now, even if I *am* toward fifty.

Well, I should like it if I could tell you all that I learned here; but I do not know how I can, unless I wait till something draws it out, and so you may expect to hear me say, for the next year or two, every little while, "When I was in Canada." Our friend D. A. Jones was D. A. Jones still, just as he always has been — a natural born leader, and a man kind and liberal to a fault. He was the acknowledged leader and father of apiculture in Canada, as he always has been. It was D. A. Jones who secured the beautiful building on the fair-grounds; it was D. A. Jones who taught Canadian people that they could raise honey, and they bid fair to beat the world (by the way). It was D. A. Jones with his great influence who brought the convention to Canada, and it is still D. A. Jones whom the city of Toronto delights to honor; and if he has ever asked for any thing he did not get, without any trouble, it is something that I have not yet heard of. He is in every respect a large man; and although some few friends do take exceptions to the at times reckless way in which he acts and speaks, I am sure that those who know him will see clearly the amount of business our good friend has to look after, and let a broad charity cover and excuse all his little sins of omission and commission, if any such do exist; and if there were none, he would be more than human. Prof. Cook and his twin brother (?) C. C. Miller were there. Friend Langstroth came in a little time after I arrived. C. F. Muth told us about buying and selling honey. Rev. W. F. Clarke had wandered from away up north, to come down among the bee-friends again. Vandervort and Pelham were there with their samples of comb foundation, and mills too, I presume, although there was so much to see that I did not see them. Friend Poppleton, of Iowa, and Judge Andrews, of Texas, were there, and Mr. House, of New York State, and Mr. Hart, of Florida, and many more whom I can not now remember.

CANADA-THISTLE HONEY.

One of the funny surprises was to find tons upon tons of the most beautiful white honey, both comb and extracted, that it has ever been my good fortune to taste, all made from the Canada thistle. The flavor is so much like basswood that I insisted that some late-blossoming basswood-trees had yielded enough to give it a flavor, although my Canadian friends think I am mistaken. Friend Jones thinks that a great part of the wonderful yields that they have had in Canada have been from this same Canada thistle; but as there is a law against raising it in this country (and a right good law it is, by the way), I presume we shall have to let the Canadians hold the laurel on this sort of honey. For whiteness, transparency, and beauty of flavor, I have never met any thing anywhere like it, and I must doubt if the world has ever before seen any such magnificent display of beautiful honey as the convention gave. I have remarked elsewhere that the exhibitors sold honey at wholesale and retail all along through the whole exhibition, and it seems to me that this is really a wonderful advancement in the matter of making fairs a success. The bee-keeper who gets the money is paid, and the purchaser who has come out with his family for a holiday, and takes home a good big pail of honey, is also happy. Why, I feel ashamed of myself, as I think it all over, to consider how little I knew about the honey industry before I set foot on the Canadian shores!

The first business of the convention was delegates' reports. Our friend C. C. Miller reported a crop rather unfavorable in Illinois; but as he made something like 60 lbs. per colony of comb honey from his entire large apiary, I told him I thought his report was one he ought to thank God for. Dr. J. P. H. Brown reports Georgia as quite unfavorable — not over 20 lbs. per colony, on an average. Judge Andrews, of Texas, gave their crop as very light, although the honey was of a very superior quality. He thinks 10 lbs. per colony would be about right. Horsemint so far has been a failure. Friend Poppleton, of Iowa, reports the white-clover yield as heavy; but after that was gone, he says they had the worst season for honey he ever knew. Friend Hart, of Florida, reports the crop as an average one. They have swarming as early as the middle of February. Along the coast counties they get large quantities of honey from the black mangrove, which, although rather dark in color, is excellent in flavor. Prof. Cook thinks that Michigan had about half a crop; about 50 or 60 lbs. per colony, he thinks, would be a fair average, one-third comb honey. From this we infer that Michigan people would consider 100 lbs. or a little more about a fair average. Friend Pelham, of Kentucky, gives the yield as much above the average, where white clover prevails. Mr. Porter, of Colorado, thinks their yield would run about 100 lbs. per colony. A great deal is gathered from the Rocky-Mountain bee-plant in their State. Friend Muth reports the yield good in the southern part of Ohio; thinks the average would be 130 lbs. per colony, but it is mostly from clover. He says it has been offered for 8 to 8½ cents, but advises bee-men to hold their crop rather than sell it at that price. Mr. McKnight gives the report from Canada as over 100 lbs. on an average, and reports a total yield of 211,772 lbs. The honey was from clover, basswood, and Canada thistles. Canada bee-men winter but little out of doors now. Friend Vandervort, of Pennsylvania, reports about half a crop. James D. Long, of Quebec, reports a yield of 100 lbs. per colony. Friend Hayhurst, of Missouri, reports the loss, during the past winter, at about 10 per cent, and an increase, during the summer, of 50 per cent, and an average yield per colony, spring count, of 35 lbs. of comb honey, and 30 of extracted. The honey is of a superior quality, and principally clover and basswood. But little wax is reported; thinks they have in Missouri about 200 practical, progressive bee-men, owning an aggregate of about 20,000 colonies, and thinks perhaps the total honey crop is not far from 1,300,000 lbs.

Some of the subjects discussed were as follows:

HOW HEAVY SHOULD OUR FOUNDATION BE?

Mr. Vandevort says if honey is coming in fast, thin fdn. does very well; but when the flow is scarce, they are apt to make holes in thin fdn. D. A. Jones prefers about 8 to 9 feet to the pound. Mr. Taylor, of Michigan, thought 7 feet to the pound was safer, but considered the form of the cell more important than the weight.

INFLUENCE OF THE SOIL ON HONEY.

Prof. Cook thought that the secretion of honey is an evidence of health in the plant, and this agrees with my experience. If we want spider plant, or any other, to yield large quantities of nectar, the plant must be enriched, and the growth strong.

DOES IT PAY TO CULTIVATE HONEY-PLANTS?

No one could state positively that it ever yet paid to grow plants exclusively for honey. It is well enough to grow honey-plants for the fun of it; but those who wish to do it as a money investment, had better choose some plant that brings a crop aside from the honey.

TO PREVENT THE LOSS OF QUEENS.

D. A. Jones says they breed thousands of queens, and have but little trouble by their missing their hives. They have the hives not much more than 6 feet apart.

WHAT IS THE BEST WIDTH FOR SECTION BOXES?

The decision seemed to be about 2 inches, or a little less, where separators are used; without separators, from 1½ to 1⅝ inches. A great many are now managing without separators, and it seemed to be the voice of the convention, that, with proper management, separators might be dispensed with, and, by so doing, a much larger crop of honey be secured.

RIPENING HONEY.

Messrs. Hart and Poppleton thought that the sun was the very best agent for the purpose. Great care should be exercised in evaporating thin honey over the fire. Mr. Corneil suggested that we should have a standard specific gravity for honey. Your humble servant suggested that there is a vast difference in this respect, for many of the glass jelly honey-tumblers that hold one pound of California honey could not be made to contain nearly a pound of much of the honey we have in our markets; and also that honey stored in a deep tank or barrel would be very apt to be heavy on the bottom and lighter at the top, the heavier portion settling. Mr. McKnight corroborated this statement. Mr. Hart declared that honey will absorb moisture from the atmosphere, if not kept in some dry warm place. Prof. Cook thinks that no man can afford to wait for the bees to ripen the honey, and also states that no honey should be put upon the market until it has a good body.

TO PREVENT HONEY CANDYING.

Several plans were given, but Mr. Jones thought that none of them were sure. Sometimes it will not candy, and then again it will, in spite of treatment. C. C. Miller said, that if you drain off the liquid portion from candied honey, and *then* melt the residue, you would get a much finer quality than could be obtained by any other process. I indorse this statement.

WHAT IS THE BEST TIME FOR INCREASE?

The question was asked, "If 100 colonies are to be increased to 150, will I get more increase by making the increase before, during, or after the honey-flow?" Prof. Cook said before, if possible; if not, afterward; during, never. Miller, Poppleton, and others, strongly favored *during* the honey-harvest.

WHERE SHALL EXTRA ROOM BE GIVEN — OVER A CASE PARTLY FILLED, OR UNDER IT?

J. B. Hall puts the empty sections under the partly filled ones, in the fore part of the season; but when the crop began to wind up, put them on top.

(*Concluded in next issue.*)

MAPLE SUGAR FOR A "SPRING FEED."

HOW IT TURNED OUT.

THREE years before this last, has been a failure with me, my bees always dying in the winter. Last summer, having two empty hives filled with comb, and wishing to save the comb, I concluded to have some bees put into them. Mr. G. Thompson took the hives and put his first swarms that came, into them—one swarm weighing 7½ lbs., and the other 5½. One was Italians, the other hybrids. I think I paid him 60 cents per lb. They did not make any surplus honey to speak of. Last summer I paid but little attention to them, thinking they would die in the winter, as usual. Last March I began to hear reports of mortality among the bees. I looked at my two swarms and found them alive; gave each a large cake of maple sugar, and let them alone until about the last of May, when I divided them (as they seemed crowded, and did not swarm), making two swarms of one and three of the other. And now I must tell you the biggest story I ever read of. In about a week after I divided them, No. 1 hive began swarming, and they kept at it until I got 8 swarms, besides one or two that left me. One I know, and I think two, went to the woods. I was telling an old bee-man about my luck. He says the most of them will, of course, die, perhaps before winter, as it is impossible for so many swarms from one to be strong enough to make a "live." Well, I have just looked them over, and I find them pretty strong with bees, and a "right smart" of brood in all the hives but one (that is queenless), but the most of them are lacking in honey. I suppose it took a large quantity of honey to raise such an immense number of bees. Well, then, to sum up, I have from No. 1 hive 8 good ones, one poor one, all well stocked with bees; four have sufficient honey to winter; the other four will have to be fed; No. 2 hive did not swarm, and now, after examining all my hives and getting, on an average, about twenty stings to each hive, and feeling sick at my stomach, you will not wonder that my enthusiasm in apiculture is cooled off, and I would like to sell out.

IRA BENNETT.

Medina, Ohio, September 20, 1883.

Friend B., it seems a little funny to think that you are the same man who wrote us a funny piece for Blasted Hopes two years ago or more. I am very glad of your letter above, for it has given abundant proof that your locality is a good one, and the plain moral is, I think, that you do not give your bees the right care at the right time. Putting a big cake of maple sugar over the frames in the spring was tiptop, and it produced the great result you have mentioned, or, at least, it contributed to it largely. Well, you should have followed this up, and, instead of letting the bees run the thing after their own fashion, you should have managed it intelligently. Had you kept all that monstrous quantity of bees that that queen must have produced, steadily gathering honey, and filling sections, or filling combs to be emptied by the extractor, you might have given us a story of a tremendous yield, instead of such a great quantity of swarms. Now, I would not feed them maple sugar in the fall, but feed them well and strong with granulated-sugar syrup, and next year you can give us a Report Encouraging, such as Medina County has never yet heard of, may be. You need not have twenty stings from each hive; in fact, you ought not to have one sting from twenty hives, if you take a smoker and go at it rightly. And besides, you probably would then have no disposition to "sell out," as you talk of in your concluding sentence.

THE OLD WAY AND THE NEW,

WITH A LITTLE PICTURE OF THE OLD WAY OF GETTING HONEY.

OUR bees are in the old-fashioned box hives. We commenced with one box 7 years ago. Some summers they would do right well, as far as swarming was concerned, but we seldom got any honey, except when a colony died, which happened quite frequently in winter. Some springs we would have just one colony left, which was the case this spring, but it was a very strong one, and swarmed four times. After reading some of the letters in GLEANINGS I got a little enthusiastic, and concluded we would have some honey from our bees, as it is quite a luxury here, there being very few bees kept in this part of the country. Well, the first thing to be done was to put what we call rent boxes on. It was a long time before any of the bees commenced working in them; but at last one colony started, as we discovered by lifting the box and peeping in, which it required an immense amount of courage to do. After waiting what seemed a sufficient time for them to have it filled, I equipped myself in bonnet, veil, and woolen mits, for, oh! they do sting me unmercifully when they can get at me. Not having a smoker (in fact, we never heard of them till we read about them in the journal), we made a big smoke with shavings and gas-tar. I lifted the rent box off and held it right over the smoke, but the bees would not leave, and the heat melted, or, rather, softened the combs, and, finding the bees refused to leave, I got very courageous, and determined to have some honey at all hazards, and attempted to take the combs out with the bees on, by cutting along the edge of the comb with a case-knife, and then lifting them out with my hands. Well, I did succeed in getting some little honey, about 4 lbs.; but such a time! There must about 300 bees have lost their lives by drowning in the honey and burning in the fire, and by being smashed and mutilated in various ways; but they were quite active in the battle, and warmed me up considerably, which did not cool my enthusiasm a bit, only I want to know what we ought to do with bees, and how to do it, so we are all anxiously waiting the arrival of the A B C, as the whole family are now very much interested in bees, although sometimes for months during part of the time we have been keeping bees we have forgotten them entirely.

ALICE PICKLES.

Woodland, Pa., Aug. 24, 1883.

Friend Alice, I am very sorry indeed to know of the difficulties you encountered in your first attempt at bee culture. I trust you will soon be in the beaten path; in fact, I have given the above letter mainly to illustrate the wonderful stride that bee culture has made in the last few years. And those who are familiar with the modern methods will probably smile at the difficulties you have encountered. What a vast difference it does indeed make in working at any thing, whether we do so understandingly or intelligently, or whether we start out blunderingly in the dark, as it were. I presume our friend Alice took time enough in getting the four pounds of honey as she did, to take off 400 lbs. by our improved methods, to say nothing of taking the lives of so many poor little innocents.

OUTDOOR WINTERING IN THE NORTH.

HOW TO WINTER WITHOUT ANY UPWARD VENTILATION.

IN my articles last spring I didn't say a word about my wintering experiences; I just thought I'd hold on till wintering talk became seasonable again; and perhaps some of the comrades thought I had had bad luck, and wanted to sneak out of confessing it. I went into last winter with 130 colonies, reached April 1st with 122, came down 5 colonies more during the spring, and commenced the present season with 117. These figures are not bad, and yet they do not give me nearly a fair showing. The loss was mainly out of 13 colonies that I tried to winter in various experimental ways. All these perished but five — nobly perished in the interests of science—but I think the experiment was worth what it cost. I hope in some future article to give the details; but, as I think I have never given fully in GLEANINGS my approved method, I will write this time of that. Of 126 colonies packed in that way, only 4 were lost. According to the coroner's inquests that I habitually hold over departed colonies, two of these died of dysentery, one was destroyed by injudicious moving after they had become weak, and one was too warm when first packed, and formed the center of cluster with the queen in a cold place, where she and part of the colony perished. The survivors could have been re-queened and perpetuated, I think, but I chose to unite them with another colony.

It is pretty evident that bees *enter the winter, predisposed to dysentery some seasons*, while other seasons they have a full stock of vigor and vitality, and will not fail to go through, unless the circumstances are very much against them. My bees last year showed signs of dysentery very early. By January 9th three colonies were losing bees seriously by coming out to die on the snow — a state of things that soon spread to most of the apiary. On February 8th I was able, by means of a fresh snow, to make a crude estimate of the number of bees that came outside to die, and averaged it at 40 bees per colony each day. I ventured a hope that there were enough bees being raised to partly balance the loss, in which I think I was correct. Feb. 13th the air about the apiary had a smell of dysentery in it. Also other bees in this vicinity died badly, and many colonies were lost. After all this, to scare a fellow I finally came off as stated above. I think it was because of a very excellent method, although in that I am, perhaps, a partial judge; but I'll proceed to dilate upon it, any way. Somebody has said, "The best packing for bees is bees;" and I have rather taken that as my banner. I reduce every colony to four frames, and then chuck two of them into a hive. I do not feed up to get the combs heavy with honey, but just take the best ones there are. There will be mild days in March, and probably in February, when an empty comb can be taken out, and one of those removed in the fall put in its place. In case all the frames were very light, of course there would have to be feeding; but that never seems to happen in our locality. If the four frames contain, exclusive of comb and pollen, eight pounds of good honey, they may be trusted, I think. To fit a hive for two colonies, of course a partition must be put in. I use two thicknesses of enamel cloth tacked to a square frame made of thin strips of wood. With this arrangement they cuddle up against the enamel, and form the winter cluster just as if they were all in one colony. Having but one hive to warm, they use, I think, but little more honey than one colony would.

The combs, as hung in the hive for winter, should be spread a little, making the spaces between about twice as large as the bees left them. As an eight-frame hive will not allow of this, I feel very strongly in favor of having a hive admit of at least ten frames, although in summer use I commonly reduce to seven by division-boards.

Upward ventilation I suppress totally by tucking down an enamel sheet as closely as possible. I do not wish to argue that porous covering is a failure; many use it, and do well; but I wish herein to give my own method just as it is. So far as there is any change, I think the present movement among thoughtful bee-folks is in the direction of the bees' own method, making all above them as close as it possibly can be.

I use folded cushions instead of sewed, wheat chaff, and three or four inches of it. Not so much is needed as when it is being constantly dampened with moisture from below; and having the chaff above always dry and warm is quite an important advantage.

It is almost needless to say, that I prefer hives with double and chaff-packed walls. If the hive is big enough, however, it can be made tolerable by using a division-board at each side.

One of the most important items of my plan is the bottom packing, which is accomplished by setting the hive on a tray of sawdust two or three inches deep. A smooth and non-porous bottom will be covered with dampness, filth, or ice, a good part of the time, to the great injury of the colony above, while thoroughly dry sawdust below keeps things "just lovely." The center of the tray must have a strip of board across for the enamel partition to shut down on, lest the bees dig under and get at their neighbors. The tray used in winter makes the bottom-board for summer by just turning it the other side up.

In the tray below them each colony has its separate vestibule boxed off with thin lumber, and not filled with sawdust, but empty. This vestibule extends in under the front ends of the frames 1½ or 2 inches, so that dead bees may drop in considerable numbers, with no danger of the entrance closing up with them. It can be cleaned out at any time, and should be looked into occasionally. Only a loose bit of board held by a half-brick separates the front side of it from "all out doors."

Last, but not least of the "wrinkles," is one made possible by the one last named. The entrance of the hive is closed, and a winter entrance 2 or 3 by ⅜ is made in the vestibule; and it is made three times as effective as an ordinary entrance would be by having it vertical instead of horizontal. That is to say, it is ⅜ wide and 2 or 3 high. The loose bit of board, armed at the end with a projecting row of wire nails, to circumvent the mice, is slipped to one side just far enough to make an entrance nearly under one corner of the hive. I advise quite earnest care to keep the entrance unobstructed at all times, except during a severe "blizzard." The quickest way to open things on the morning after a snow is to take a tea-kettle full of boiling water, and give each entrance a little tiny bit of a spill of it, being very careful not to pour enough to make steam rise up inside the hive. So the separate items of my plan are, 1, two colonies in a hive; 2, spreading the combs; 3, no upward ventilation; 4, chaff cushions; 5, chaff walls; 6, bottom packing; 7, the vestibule; 8, the vertical entrance.

But, I see a practical bee-man rising and saying, "Mr. Hasty, is it not a great deal of work to get a large apiary ready for winter by your method?" Ah, me! it *is* lots of work — and perhaps you don't want it just for that reason. E. E. Hasty.

Richards, O., Sept. 15, 1883.

Friend H., I am glad you told us in the commencement that you succeeded with your plan; for had you not, quite a number would have been ready to find fault with it. In fact, I felt inclined to find fault myself; but when I reflected that you did so well, I concluded I wouldn't. I have been satisfied that bees can be wintered safely under the enameled sheets, and with no arrangement for upward ventilation; but to do it we need some *sure* arrangement for lower ventilation, just such as you describe, and I do not know but you would be obliged to keep the snow away if you close the top up entirely, as you suggest. I like the idea of your perpendicular entrance very much, for I know it is a bad thing to have the bees drop and close up the entrance. We have had it happen a great many times. I like the idea of your vestibule, but it would be quite a difficult matter to have it in chaff hives. I am inclined to think that *I* should prefer a little ventilation through the covering over the bees, such as burlap instead of enamel sheets, although I confess I like your plan, and hope it may be tried quite extensively.

OBSERVATIONS BY FRIEND STEPHENSON.

In accordance with my promise, I send you a few notes from my bee journal, which I hope may prove interesting to some of my friends. I have been very careful in making observations and drawing conclusions, as I have no desire to mislead myself or any one else. My remarks are arranged under headings, and on perusal you will find instances both confirmatory of and exceptional to some of our generally accepted bee laws.

WEDDING FLIGHTS OF QUEENS.

Within the last few weeks I have been the privileged though uninvited guest at the nuptials of quite a number of young queens. No. 1 was amongst the progeny of one of your imported Cyprians, and hatched out in one of the original 1-frame nuclei in which the brood-combs were shipped. These little boxes, with the addition of a cover and an auger-hole entrance, answer splendidly for queen-rearing in warm weather. I also find them very useful for transporting royal cells when on Italianizing expeditions. As soon as I have closed cells sufficient for my purpose in one hive, I get them all attached to one comb; and by next day all is safe for the road. Just before starting I place the comb with its adhering bees into my box, stop the auger-hole, and tack on my gauze-cover, and nothing could be better. On arrival at my destination I liberate the bees, substitute a wooden cover for the gauze, and I can remove my cells at leisure. I have thoroughly tested this plan, and by using wired foundation my combs have borne horseback transportation with perfect success. To return to our queen: I noticed her condition during one of my periodical examinations. She had evidently returned quite recently from the wedding, as a whitish substance from which two horn-shaped filaments depended was clearly observable. This was on the fourth day after her emergence from the cell, and in three days more she was laying. The increase in size after impregnation was very remarkable, as in some young queens this is not so noticeable.

Another young queen, reared from the fine yellow Cyprianess purchased from you was also observed. She presented the appearance so well described by Huber, "The last segment of her body appeared to be filled with a whitish substance." On examining her later on, the sack had become nearly detached, and the bees were in full chase after her, evidently endeavoring to remove it. She then looked very much like a bee from which the sting had been partially torn out.

My next young queen, one of the finest I ever reared, gave me the opportunity of seeing her actually on the wing, and timing her flight. I was watching her nucleus, and happened to see something like the glint of a golden sunbeam flashing before the entrance, and it immediately occurred to me that it must be "Her Majesty" out for an airing, and so it turned out to be, as she shortly entered in all her virgin beauty. Presently she took flight again for a 5-minute sally. Then she rested awhile, and, after a good square meal of honey, which I noticed her enjoying, she rushed forth again, and this time she was absent some 26 minutes. But, alas! in vain. It had then grown late in the evening, and she rested for the night. Next day was fortunately fine, and about 2 P.M. she took a preliminary flight of a few minutes, and then she was absent for about half an hour. Again she rested, and after once more disappearing for nearly 45 minutes she returned at length, bearing in her body unmistakable proofs of a successful flight.

IMPREGNATED QUEENS TAKING AN AIRING.

Next day I observed this same queen whilst taking a short flight of 5 minutes or so, but I have never seen her on the wing since. Another young queen I intercepted on the alighting-board of her nucleus, on her return from a successful flight. Those flights were taken from the fourth to the tenth day after emergence from the cell, and eggs were laid 3 to 4 days after.

QUEEN-REARING, WITH ORIGINAL QUEEN CAGED IN THE HIVE.

I chanced to verify this in a hive containing a caged queen, but it was evidently done under protest, as only one cell was completed, though suitable brood abounded.

PERSISTENT DESTRUCTION OF ROYAL CELLS.

I have experienced considerable trouble in getting some hives of bees to accept royal cells, even after all ordinary precautions had been taken. I think, though, I shall now succeed, as they have exhausted all brood of suitable age. I find friend Doolittle is not strictly correct in saying a royal cell is never torn down when substituted for one built in the hive, as I have had several most unaccountably destroyed, even when placed where the original cells were removed; I do not think fertile workers are present, but will endeavor to satisfy myself on this point by watching for their eggs. I should much like a few suggestions from you or other apiarian friends on the subject.

ACCEPTANCE OF CAGED QUEEN IN A HIVE ALREADY CONTAINING A QUEEN.

This occurred in a nucleus containing a virgin queen. The caged queen, also a virgin, was cordially received — not simply ignored, as is usually the case with such juveniles. Had the other queen been in a laying condition, possibly the reception might have been otherwise than cordial. What think you, friend Root?

The bees in this section are gathering just now from buckwheat and wild hemp in the early morning, and later on in the the day from polymnia, or stickweed, ironweed, and touch-me-not. I have failed to see them working on goldenrod, though we have it in endless profusion. My bees are now bringing in a deep orange-colored pollen. I wonder what flowers it can be from.

H. STILLINGTON G. STEPHENSON.

Charlemont, Va., Sept. 7, 1883.

Thank you for the interesting facts you furnish, friend S. I have long been aware that young queens fly out after they are impregnated; but why they do this I am unable to explain. It is also pretty certain that they become impregnated the second time. I should cure them of refusing to rear cells, by giving them several combs of brood — enough, in fact, to hatch out a better generation of bees.—I did not understand friend Doolittle to say that a royal cell is *never* torn down when put in the place of one already built. I know that the bees will sometimes accept the queen where they have one already; but where they will keep two queens right along, the case is an exceptional one. I think that much depends on the temper of the bees. We usually find some hives in our yard that will accept of any queen; and I think very likely that such a one would accept and take care of two queens, provided the two queens did not molest each other.

QUEENS ACROSS THE ATLANTIC, BY MAIL.

HOW DOOLITTLE DID IT.

SOME time during last winter, Mr. Angus Cameron, of Scotland, wrote me that he wanted one of my best queens sent him by mail, during the summer of '83, if I was willing to try the experiment of sending one in that way. I wrote him, that although I had little faith in getting a queen alive through the mails to him, yet I was willing to test the matter; and if I did not succeed, I would stand the loss of queen. Accordingly, on the morning of Aug. 1st I made a cage as follows: I got out a basswood stick, 2 in. square and 6 in. long; ⅜ inch from either end I bored a 1-inch hole nearly through, into which the candy was to be placed. I now turned the block ¼ over and bored two 1½-inch holes, 1-16 of an inch toward the center, from the two 1-inch holes at the ends, which made the two 1½-inch holes come together. I next poured melted wax into the holes on either end, so as to prevent the moisture in the candy from soaking into the wood, after which I cut a ⅜ hole through each into the 1½ hole, as a means for the bees to get the feed. I next made the candy by taking pulverized sugar, and stirring honey into it till it got rather thick to stir. I then took to kneading it till I had it so I could roll it into a ball (as we boys used to pack snowballs), and placed it in a saucer, having it retain its shape, except flattening a little on the under side where it lay on the saucer. If it would not do this, I kneaded in more sugar till it would. This is the way I have made all my candy for queen-cages this season, and I have not lost any, except one that I think was injured before she left. I have sent several to Texas, California, and even as far as Oregon, without loss; hence I have been particular in telling how I made the candy. I next filled the waxed holes with this candy, pounding it in with a stick till the holes were full within ⅛ inch, when a cork was driven in, thus preventing any escape of the honey. At about 11 o'clock I caught the queen, together with 25 worker bees which were about six to eight days old, as nearly as I could judge, and placed them in the cage, tacking wire cloth over the top of the 1½ holes. In catching bees to ship by mail, I always take those filling themselves with honey, waiting till they are nearly filled. After tacking down the wire cloth on the cage, I placed it, wire cloth down, on two ⅛-inch strips, and left it till next morning, thus allowing the queen to rid herself of eggs, and the bees to clean the cage all out, so they would not be trying to carry out little pieces of wood and dirt on their journey. At 6 o'clock the cover was nailed on, which was a strip 3-16 thick, and covered the whole of the block on the side where the wire cloth was, except two ⅜ holes, one over each 1½ hole. The whole was now wrapped in strong manilla paper, except the two ⅜-inch holes, thoroughly tied with a strong string, and a tag bearing the address tied thereto. At Mr. Cameron's suggestion I registered it, so as to secure safe delivery after it passed the boundary of the U. S., as queens are not supposed to pass in the foreign mails. At 7 o'clock on the morning of Aug. 2d the queen left for her home in the Old World, and I awaited the result. The evening of Sept. 4th brought this letter from friend Cameron:

> You have done it, my friend! you have done it! Shortly after 8, on the morning of the 16th inst., I received the package containing the queen bee. You may be sure I very quickly peered inside, and as quickly had the satisfaction of seeing *probably the first live bee that ever crossed the Atlantic* in the mails. I delayed as little as possible before I opened the cage, or royal palace — for such it proved to be — clean, sweet, and in perfect order. On opening I found the queen in splendid trim, as were her attendant bees. Two only of the bees were dead. The candy was not half eaten, and it had kept its place in the cage. No spot of dysentery; in short, every thing was first class. I allowed the queen her liberty in the hive, and this morning, while I held the frame in my hand, I saw her deposit eggs. Success to her. With kindest regards, and many thanks for sending her majesty, I am yours, etc.,
>
> ANGUS CAMERON.

Blair Athale, Scotland, Aug. 18, 1883.

I have been particular in giving all the minutiæ of this, thinking that perhaps the plan might be improved upon, so we might yet get queens from Italy by mail, thus saving the heavy expense of importing.

G. M. DOOLITTLE.

Borodino, N. Y., Sept. 13, 1883.

Well done, old friend! I am glad indeed to know that the matter has been accomplished; and when I first read your letter I remarked to our proof-reader that it is no wonder you succeeded, because you always do your work so well and carefully that success is pretty sure to come. I am rejoiced to know, too, that it was done with the very same bee-candy that we have been using for more than a year past. There is one thing greatly in your favor: the queen was only 14 days on the route. If I am correct, that was rather quick sailing. We have had queens live after being two weeks on the route; that is, where they were misdirected, or something of that sort. Now, friends, the way is open toward having queens mailed direct from Italy. We must forward cages to our foreign friends, and get them to put the queens up so carefully that at least a part of them will reach our shores. If it can be done, a very great saving indeed will be made over the expensive and comparatively slow way of having them sent by express.

FROM L. M. SHUMAKER; THE FIRST 1000 LBS. OF HONEY.

SHALL WE GO TO FLORIDA?

MY FRIEND, I wrote you a very gloomy letter in February, on the subject of bees, honey, pasturage, and *failure*, and asked your advice as to a removal to Florida. The sum of your answer was, that you *doubted* if I knew enough to travel so far from home; that Florida was no better than Virginia to a green hand, and advised me to study — learn, and to get and keep ready for the harvest when it came. Of course, the phraseology was courteous, but the substance is about photographed. Well, I didn't go to Florida, but pulled off my coat, donned my apron, and set to work to get ready. I doubled down from 43 to 34, fed 200 lbs. of granulated-sugar syrup; but, with all my work and skill, I had only 26 colonies that gave me as much as 50 lbs. of surplus. These, with about half a dozen large swarms, gave me 1220 lbs. of extracted honey, and a few over 700 perfect sections. I took off about 300 unfinished sections, and put back 250 over colonies that had brood-chambers full, but they seemed to consume the 100 lbs. of honey I fed back, as they did not complete more than a couple of dozen. Friend Root, when I looked upon my first barrel (42 gallons) of pure white honey, and, turning, saw stacked up eleven of your large shipping-cases filled with white capped sections, I felt very grateful for the timely words of advice.

HELP IN THE APIARY.

I am almost an invalid; have been a sufferer from gravel and stone from the time of the war with Mexico; I am now sixty years old, and the only assistant I could get was a dram-drinking, pipe-smoking negro, whom I found idling around the depot. Nevertheless he is a good-tempered, willing, and industrious soul, and doesn't care a button for the stings. If he were not so very forgetful, and would not get tipsy on Saturday night when he gets his money, he would become a fair help. Have I done well, or not? White clover and sourwood boomed; and if we could have had two or three timely rains, our harvest would have been doubled; but a drought of eleven weeks dried up the blossoms. It is now storming and raining — the only rain but one, the 21st of August, since the middle of June; yet horsemint and sumac have given us some honey. If I had been stronger, or had had better assistance, I would have taken six or seven hundred pounds more; still, three-fourths of my 51 colonies (increased 17) have the brood-combs, all ten, filled. I lost four swarms, and, singularly enough, *two* of them left without clustering within a mile. Alec followed the first one about a mile, and they made him cross Dun River twice. The other circled up and up, and away *down* the river. I think both left because the entrance, being the full width of the hive, and blocks being removed on account of the heat, they came out with a rush — all in a minute. I at once narrowed all my entrances to four inches — widening them at dark.

SECTIONS, TROUBLE WITH.

I have had some trouble with the last 1000 sections. They do not fit close, and hold where dovetailed. I have had to clinch them by bruising with a small hammer; and in casing them for the hives they then very often came apart. In other respects they are satisfactory.

PUTTING IN STARTERS; ANOTHER WAY.

I have adopted a very satisfactory and much more expeditious way of fastening the fdn. starters. Before folding the section, I fasten the starter firmly, and exactly in the middle of the top side, and so that it hangs square. I find my bees work it as they find it; if it hangs crooked, they work it crooked. I lay the one piece out on my bench, the wide or uncut side to me, and with a piece of narrow yellow wax I rub back and forth on the middle of second side, or the one next beyond the saw-cut; then with my left hand I take a starter from the pile and lay it square on the wax-rubbed line, and a little beyond the line; then with the right hand I take up my try-square, wet the end of blade, lay it on the fdn., and press hard, drawing the square from left to right, to make it firm. I then put both thumbs to the wide piece, pressing it down into the slot, and lifting the other end nearly to a right angle; I then move thumbs forward to third side, and repeat. I then turn the piece end for end, and bend the third wide side. Now bend the second from me in the same way, gently pressing the dovetailed ends together, and tapping with small mallet or hammer, and put it in the case which is ready for it. I very rarely see a broken or warped starter.

MAKING WOODEN MATS WITH WIRE INSTEAD OF TWINE.

While following your advice I learned one or two things that I am persuaded can be utilized to the good of bees and keepers. I find that the bees will bite through the best enameled cloth, and will bite and fray the twine on the wooden mats. Suppose that, in place of flax or hemp twine, you weave the mats with fine plated wire, and then weave them so that the slats run crosswise, and make them of tough sapling or poplar, and only ⅜ in. instead of ½ in. wide. I think you will get the very best covering for the frames yet made or discovered. I am willing to back my opinion by asking you to make me fifty, as per above, to lie over ten L. frames, in L. hive, crosswise.

PATENT RIGHTS.

Friend Root, I salute you, and say amen to the firm resolve and purpose expressed in Sept. GLEANINGS, on the subject of the one-piece section. I felt concerned lest, in your extreme reluctance to go to law, you would permit Forncrook to win by default a case that every lawyer will say is only *prima facia* as to title. His patent is not conclusive, by any means, and Fiddes' letter, the three sketches, and McConnel's testimony, prove that he did not invent, and can not claim even priority in its use, or in any combination of the several principles involved in forming the one-piece section. Why, we had here in Danville, a year ago, just such a case, or cases. Our planters for years have been curing the bright yellow tobacco with flues made of stone, and covered with cast-iron, then with sheet iron, then with common stovepipes extending from a stove outside into and through the barns, and they gradually made the pipes larger and larger, and built a furnace outside to increase the heat and smoke. Well, a Mr. Jack Milner got up a sketch and model of what the planters had been using, hurried to Washington, paid the fees, and got letters patent for curing tobacco with sheet-iron flues (big stove-pipes), extending from a furnace outside, into and over the floors of the barn, etc. He came home and brought suit against every man who made big stove-pipes to cure tobacco, and threatened to sue every man who used them and refused to pay him a royalty for barn-right. A year ago the cases were tried before District Judge Robert W. Hughes, sitting as a Circuit Court. After but little testimony, and much speaking, Judge Hughes instructed the jury to the effect of turning Millner out of court, after wiping his face with the coarse rough towel of costs. I hold myself bound with all those bee-keepers whose paramount rights you are guarding, and propose to defend; to pay my pro-rata share of all costs incurred in resisting Forncrook, Flick, or any other frauds, in their attempts to levy black-mail upon our fraternity.

HIVING-BOXES, AND BASKETS.

Friend R., I have no use for a hiving-box, basket, or even apron, though Miss Cyula Linswik's hiving-apron is unique. I take the hive filled with ten frames of comb, or fdn.; and if the cluster is low (and all my trees, nearly, are low), I put it on a table and block it up with extra covers, etc., until I can bend the limb so that the bottom of cluster will touch the frames, and shake hard once; the queen nearly always falls with the cluster on the frames or into the hive. I wait a few minutes, shake any bees that may re-cluster, brush all the bees around the edges of hives on to the frames, and put on the cover, and shade if necessary. In half an hour I remove it to where it is to stand. If the cluster is rather too high for a table, and not high enough for climbing and sawing, I take my folding ladder, having top-board wide and long enough to hold an L. hive, and, spreading the legs, I fix the hive, and, by bringing the legs together, raise the hive under the cluster; even when I saw off a limb I carry the cluster and shake the bees down on the open frames. I rarely have a swarm to come out, if the hive is cool and otherwise in order. Alec forgot one last July, and left the bees exposed to the hot sun for several hours. Of course, they sought a cooler place.

Danville, Va., Sept. 11, 1883. L. M. SHUMAKER.

I am sure, friend S., I am much obliged for your very kind words, although I did not mean to say that you did not know enough to go to Florida.—In regard to your help in the apiary, you have surely done well; for not only have you done a kind thing for the friend you speak of, but you have unconsciously taken *your* first lesson in teaching pupils bee culture. If you can teach an old darkey (begging our old friend's pardon), you will surely succeed in teaching a bright, intelligent boy or girl. And now, friend S., go on. Do not let your light cease shining. —I am very sorry that any of our sections were made so loose they did not hold. Tell us what it cost to fix them, and we will pay you.—In regard to your manner of putting in starters, I thank you for the suggestion of a try-square. I think the blade of a try-square would answer nicely in rubbing in starters.—Wire instead of twine has been suggested in making wooden mats. The objections are, that the mat would be so stiff it would not lie down anywhere, unless extremely fine wire were used. In that case, the repeated bending would be quite sure to break it.—Thank you for your kind words in regard to the patent-section business.—Your plan of using a hive filled with combs for a hiving-box is not quite new; but for all that it may be liked by many. I should say they are too heavy and unwieldy, compared with a basket or box.

NOTES FROM GROVESIDE APIARY.

NEED OF AN EXTRACTOR, ETC.

I HAVE to-day completed an examination of my twenty colonies of bees. I found them strong, and apparently healthy, with an excess of honey in the brood-combs, but not so well stocked with eggs and brood as I should like to have found. Some of the swarms that were cast the latter part of June have fifteen American frames that contain an aggregate of 60 lbs. of nicely capped comb honey, by actual weight. Perhaps it may be asked, why I did not extract, or put on supers, and obtain some of the surplus in boxes. Until the present season I have not felt the need of an extractor, and delayed procuring one; but, if Apis and myself do not dissolve partnership, ere another season we shall procure one, probably.

Supers were put on. As soon as the swarms had drawn out the foundation supplied them at hiving, and stocked it with eggs, brood, and honey, sections were put on and occupied in force; but the occupation was of short continuance, as the cold stormy weather that soon followed retarded the flow of nectar, and the bees sought a more congenial atmosphere in the brood-chamber, where they have remained most of the time since. The racks, instead of containing sections of nicely capped comb honey, have only sections from ¼ to ⅔ full of clean white comb as evidence of what might have been done had "good corn weather" prevailed in its season.

EXCESS OF POLLEN.

After cold and wet, came cold and dry, and the storing of pollen appears to have been in order, the lower third of some of the combs being a complete mass of it. Should I conform to the monitions of those of greater experience than myself, I should remove this superabundance of pollen from my hives; but as I have not done so heretofore, I have concluded to let it remain, not considering it detrimental to the health of bees, unless it becomes decomposed by age or improper conditions inside of the hive. I have not as yet observed any dysentery among my bees, and do not believe that "sound" pollen will produce it; but I do believe that decomposed pollen (when eaten by bees after their digestive and assimilating organs have become debilitated by a protracted winter's confinement in a cold damp atmosphere) will aid in its development.

VENTILATING FOR COMB HONEY.

My experience this season and the one preceding has not been favorable to the acceptance of a blank space above the brood-frames, as delineated in

GLEANINGS, p. 441, Aug. No.; at least, not in this climate, when Italian bees or their hybrids are the subjects of manipulation. My brown and black bees, old colonies and new, that commenced working in the top sections early in June have continued their labors uninterruptedly, and are at present finishing the capping of the *outside* sections. No, Mr. Editor, the comments on pp. 442, 443, appear to embody about the right ideas "in a nutshell." Conditions must receive their due consideration, in attempting to apply radical rules in apiculture, as in other pursuits, where the weather and animal or insect nature are expected to co-operate. During the middle of sultry summer days I usually raise the caps of my hives and let the air circulate around the supers, but close them in the evening; exercising this precaution to prevent my bees being driven from the sections by a "cold wave" during the night, as they have been several times this season, with the caps closed. In a locality exempt from sudden extremes of temperature, such precautions would be unnecessary; but in Maine I think they are necessary. Right here I feel like venturing the assertion (although based on short experience), that the sudden changes noted in foregoing are a great drawback in working bees for comb honey, especially Italians of the orange-colored variety or their hybrids; for when once driven from the surplus boxes, they seem loth to return, except under extremely favorable conditions. How say others?

Although not ready to report in full the result of our bees' labor, it can be approximated as follows: Nine colonies in spring. Increased from eight colonies — eleven natural swarms, and one by division. Honey, at a safe estimate, 200 lbs. Two of the original 9 were transferred and united, making our present number 20 colonies. J. F. LATHAM.

West Cumberland, Me., Sept. 6, 1883.

NEW ZEALAND,

AND THEIR NEW BEE JOURNAL.

I DO not often see letters from New Zealand in GLEANINGS; but now that Mr. Hopkins has started a bee journal, you will have regular reports on the position of the science in this part of the world. Your big reports often astonish us; but when we have emerged from our infancy we hope to hold our own against the best of you. We have no basswood, to be sure; but I am sure you can't beat us in white clover, thistles, and such plants common to all countries. In this part of New Zealand the honey season may be said to open about the end of August, with the weeping-willows, which abound everywhere. Then in September the native bush begins to flower, and honey comes in steadily till the end of October, when white clover and almost every plant that grows seems to be in flower; and if the weather is not too dry, there is a great glut of honey for a few weeks. With January comes the thistle, that best of all the honey-plants, and continues yielding till the end of February, when a prudent bee-keeper ought to consider the surplus season at a close.

I am but a beginner in the art, having had only one year's experience. I have 80 colonies in Langstroth hives; but my bees are all blacks, and I am very desirous of having the apiary Italianized next season. Mr. Adams, of Gisborne, tells me he is importing queens from several American breeders; and if he is successful, I shall be able to get stocked from his apiary.

Though I have no doubt that this is as rich a honey-producing country as America, we are handicapped in two ways; first, we have not the unlimited market you have for honey; and second, we pay three times the price for our supplies. This last evil is gradually mending, I am glad to say; opposition is beginning to tell its inevitable tale. I have great pleasure in the study of GLEANINGS and the *A. B. J.*, and hope to have a good yield next season by following the instructions of your masters in the art. GEORGE STEVENSON.

Poverty Bay, N. Z., August 10, 1883.

Thank you for your kind words, friend S. We have received a copy of the New Zealand *Bee Journal*, and extend the right hand of fellowship. No doubt it will be a great aid to you in your country, which differs from ours in so many ways.

QUEEN-REARING.

ABOUT ARTIFICIAL DRONES.

WE are told, that "out of the abundance of the heart the mouth speaketh." I don't want to claim, Mr. Root, that I know all about this queen business, but I do wish to intimate that I am deeply interested in the business, and now about drones from unfertilized queens.

My experience, though limited, is, that the drones are always of good size when the queen is perfect; most drone-laying queens are caused to be such by having imperfect wings; and almost all the queens with imperfect wings are under size, crooked, or deformed in some way, and I think this accounts for the drones being so small. I may not be right in this; however, if I am not right, somebody else is not right too; for if the drones are really less when the queen is not fertilized, the fact partly gets away with the theory, that the queen being fertilized does not affect her drone progeny. Surely here is quite an opening for valuable discussion, and I think we shall find that a great many of us are partly in the dark.

While I am on the subject of small drones, I should like to mention that I once had a queen whose progeny was very small; some of the workers were very little larger than the large green "sweat" bees that work so much on sumac and other small flowers. I am pretty sure this queen was fertilized by a drone from a fertile worker, as I had a hive full of them at that time.

INSERTING QUEEN-CELLS.

Some one has said, that it will do just as well to lodge the cell between the top-bars of frames, instead of inserting into the comb. This I have given a thorough test, after depriving 25 hives of their queens, and smoking, as usual, until I saw they had missed their queen. I lodged the cells in between the top-bars of frames, and out of the 25 there were only six that did not destroy their cells, and begin the construction of other cells. Now, an idea occurs to me which, if it does not prove to be old and discarded, that I intend to test another season. It is, that the top-bar of the frames could be made of two pieces of equal length, and disconnected in the center about 1½ inches, but held together by means of folded tin tacked on the edges of the top-bar; we could keep the comb cut out so as to lodge the cells straight above the range of comb.

CHAS. KINGSLEY.

Greeneville, Tenn., Sept. 14, 1883.

Friend K., you have certainly given us a new thought about this matter of small queens. I agree with you, that the drones from a queen fully matured, even if she is prevented from meeting the drone, should be full size, and good drones in every respect. It is the drones from fertile workers that are so small as to be a little suspicious. We practice inserting queen-cells almost entirely by putting them between the combs, but we do not put them between top-bars, for we have had abundant experience like yours. They are very apt to be torn down. We take the queen-cell between the first and second fingers, reach it well down between the combs, so as to be caught by the brood on one or both combs, when they are moved up so as to squeeze it slightly. I am sure I should not like a top-bar divided as you suggest.

MICHIGAN STATE FAIR.

BEE AND HONEY EXHIBITION.

IT is admitted by all, that the exhibition of bees, honey, wax, apiarian implements, etc., at the Michigan State Fair, now held at Detroit, is the largest and finest ever shown. Here; take my arm, and, in imagination, let us enter the hall.

At the left, as you enter, is the exhibit of Mr. H. D. Cutting, of Clinton, Mich. He makes the largest exhibit of implements, there being 63 different articles. He also obtained the first premium on bee-keeping literature, having copies of almost fifty different publications, all of which were arranged in a fancy show-case. A medley of bee-keepers' photos in the show-case pleased many a pair of eyes. The premiums awarded to Mr. C. amounted to $33.00. By the way, Mr. C. deserves great credit for the general success of the exhibition. Several years ago, when the bee and honey exhibits, if any there were, were sandwiched between the limburger-cheese and cabbage exhibits in Agricultural Hall, Mr. Cutting resolved not to rest until the Agricultural Society recognized bee-keeping as an industry; and in this resolve he has been untiring. The result is, that a building has been erected, and a department created for bees and honey; and although Mr. C. has labored under great disadvantages in his thankless task, he *now* feels fully repaid. Bee-keepers of Michigan, we owe Mr. C. a great debt of gratitude.

Well, let us step along. Here is the space occupied by E. T. Lewis & Co., Toledo, Ohio. Just look at that mammoth smoker, two feet in height, labeled "Take me out to see your hybrids." Well, if it hasn't a whistle in the nozzle, and a mouth-organ at the back! Cutting had the "blues" until *that* arrived, *not* afterward. Mr. Lewis exhibited bee-keepers' supplies, and secured first premiums upon his honey and wax extractors.

Hello! here is a display of goblets filled with honey; also fancy cases of comb honey, beeswax, and Mason jars of extracted honey; they are from James Fry, Leslie, Mich. He also had a colony of Italian bees out of doors.

Are those drawings of plants over in that corner? No, those are the plants *themselves*. They are specimens of honey-producing plants, pressed and mounted by C. M. Weed, of the Agricultural College, Lansing; and so well has he done the work that the natural colors are preserved. There are about 50 specimens, and, as he well deserves it, you see Mr. Weed has been awarded the first premium.

What is this we have run against? Bring that box here; let me climb up and look into it. Why, it is a mammoth honey-extractor, capable of receiving six combs at a time; or if only three combs are put in at a time they can be quickly reversed inside the can by a single touch of the finger. This extractor is exhibited by August Koeppen, Flint, Mich. He also had on exhibition, not a chaff, but a *tow* hive. Not only the walls, but a movable bottom-board, six inches thick, was filled with tow.

Here is a complicated hive called the Queen home, or winter protector. Well, if they haven't given it the first premium! Yes; but one of the committee said, if he could have had *his* way, the premium would have been given to a plain, simple, unpretending, eight-frame Langstroth hive.

Well, if here isn't a fine exhibit! how it *does* shine! I wonder whose it is. Well, you *needn't* wonder; just look up there on the wall; there are the letters, built in hives by the bees; they are M. HUNT. Well, where shall we begin to look at it? Oh! commence at one end, and take things in their order. Here are chaff hives, and out of doors are two colonies of bees upon which are awarded a first and second premium. Over there in the corner is a very tastily arranged collection of bee-keeping literature. Here in front, under bell-glasses, is honey "fixed up" in such beautiful fancy shapes that it is impossible to do it justice. Here is a crate of white honey, here sections with glass sides and fancy, turned wooden corners, pyramids of octagonal sections with openings in the center filled with fine bouquets, several elegantly finished cases of fine white comb honey, extracted honey in glass pails, bottles, cans, jars, tin pails, and large tin cans, all of which are adorned with showy labels. There is a round pyramidal stand of shelves, about four feet wide at the base, and the same in height, the shelves of which are filled with little pails and cans of extracted honey, and surmounted with a large glass jar of honey, all of which makes a very fine display indeed. And just look at those three fine pyramids of wax, molded in fancy molds. I wonder why they didn't award it a premium. Look at the bee-keeping implements. There are *lots* of them, aren't there? Yes, enough to take the second premium. Mr. H. receives first premium upon extracted honey and comb fdn. His premiums, in all, amount to over $50.00. Oh! I came near forgetting; he had two 1-frame nuclei — one of Italians, the other hybrid. Mr. Hunt occupies just one-fourth the building.

Well, here we are at the exhibit of W. Z. Hutchinson; and although I don't like to talk about it, I suppose I *must*. The part that first attracts visitors is the display of comb honey, some 2500 pounds of which are piled up tier after tier, in pyramidal forms, until it can go no higher, for the simple reason that the *roof* has been reached. The base of the pyramid is 20 feet long, and many, many an old bee-keeper and traveler (and *one* traveler had visited the bee shows of Europe) exclaimed, "That is the largest and finest exhibition of comb honey that I ever saw." Each "step" of the pyramid formed by piling up the cases of honey, is surmounted by a small pyramid of tin pails of extracted honey, and tin pails of extracted are hung upon nails all along the "plate," rafters, and cross-beams. Above all this, nailed to the roof, is a huge placard, "3000 lbs. honey!" Right where visitors could poke their noses against them are 3 glass hives containing full colonies of bees, while large gilt letters upon the glass announced that one hive contained "Blacks," another "Syrians," and another "Italians," while a one-frame nucleus contained an "Italian queen and bees." All these glass hives turn upon a revolving pivot, and visitors can turn them so as to get the best light. A dozen queen-cages containing queens are attached to a board that turns upon a pivot in a similar manner, and many a person who had never seen a "queen bee" saw one. A shipping-crate, covered with silver paper, trimmed with gilt paper, filled with sections, is surmounted by a pyramid of sections, some of which are covered with silver and gilt paper, and over the whole is a square case of glass, the corners of which are trimmed with silver and gilt paper, and letters on the front, in gilt letters, "Gilt-edge Honey." Dr. A. B. Mason said that it was the finest thing of the kind that he had ever seen. The sections in the shipping-crates were awarded the first premium, as was the large display of comb honey. A tall pyramid of wax, surmounted by an old-fashioned straw hive formed of wax, also received a first premium. A collection of honey-producing plants, pressed and mounted, and bound in an Emerson binder, interested and pleased many a visitor, as the leaves are turned and returned. It received a second premium. A show-case, lettered on the front in gilt letters, "Bee-Keeping Literature," contains 47 copies of periodicals and publications, and was awarded a second premium. Then there is a fountain pump, a folding tent, queen-excluding honey-board, supers, shipping-crates, etc., that make up a collection of implements. First premiums were awarded Mr. H. upon Italians and Syrians. His premiums in all amounted to about $80.00. The aggregate value of all the exhibits is $2000.

The reporters of the city papers were much interested, and, of course, we "stuffed" them, and they gave us good long notices, and mentioned the bee-keeping show as the "new feature."

But the best of all is, that the officers of the society have become *very* much interested, and have promised to do any thing reasonable that we may ask of them. The exhibit of this year has opened their eyes to the attractiveness and importance of an apiarian exhibition; and all that is now necessary is that bee-keepers come forward and make displays, and we shall soon have so large and attractive a premium list that bee-keepers can come to the fair, and find it *profitable* in *dollars* to do so.

W. Z. HUTCHINSON.

State Fair Grounds, Detroit, Mich. Sept. 20, 1883.

Friend H., I am pretty well satisfied that you and I have both of us done a wise thing in deciding to attend the conventions and displays of honey at our fairs. They are, without question, one of the greatest helps in the way of educating the people in the way of apiculture that have been devised. It is true, there are objectionable features in all fairs, but I suppose it is because those who are hungering and thirsting after righteousness have been too much in the habit of holding aloof. You say the display was the largest and finest ever made. Well, that is just what I thought about the exhibition at Toronto. But I think we shall not have any discussion on this point. I congratulate you on the happy vein in which you have described what you saw there; and it has occurred to me that it might be desirable to know what you heard, as well as what you saw there. My recent visit has firmly decided me on one thing, and that is, that our next county fair shall witness an exhibition of honey such as has never been seen in Medina County before. In Toronto, the exhibitors were permitted to sell honey while exhibiting the mode in which it was obtained, and in this way they had ample pay for all the trouble and pains they took in carrying their product to market. Friend Jones has the credit of this idea, I believe. Did you have similar arrangements at Detroit? The retail trade that was kept up in the honey-house at Toronto was deemed one of the pleasantest features, and it afforded a most excellent opportunity to discuss and decide in regard to the proper kind of packages to put honey in, so that consumers might carry it off with them with the least trouble and inconvenience. Who shall say that the time may not come when wide-awake honey-producers will dispose of their whole crop at a good round price while exhibiting it at our honey shows, in connection with our State and county fairs?

A PARASITIC HONEY-PLANT.

THE DODDER.

ON several occasions, while walking through alfalfa fields, I have noticed honey-bees visiting the tiny blossoms of the dodder. They seemed very much in earnest in prosecuting their work, for at times one bee would crowd another out of the way, in order to get in first. The dodder, or *cuscuta*, as you are undoubtedly aware, is a curious plant of a parasitic nature. The fact of the bees working on the dodder does not of itself attract any particular attention; but when we come to look into the matter more closely we find that it is one honey-plant, so called, feeding upon another. The flowers are abundant, and give forth a pleasant fragrance. Although we are all very desirous of encouraging the cultivation of honey-plants, we would not recommend the least attempt to try it, for honey or otherwise.

To give your readers a better idea of this parasitic plant, the writer thinks he can't do better than to quote the following extract from an article by Jos. F. James, custodian of the Cincinnati Society of Natural History, in Vick's *Magazine*, Vol. V., p. 330:

> The yellowish-colored plant commonly seen climbing and twining over other plants, and which sometimes causes great mischief in cultivated fields, is the dodder. It starts in life like any other plant; that is, it germinates from a seed, and has at first a root. But as it grows, and the stem reaches far and twines on other plant-stems, the root dies, the stem severs its connection with the earth, and depends for the rest of its life on the nutriment it can secure from the plant upon which it has fastened itself. It sends its suckers deep into the stem of its benefactor, and, absorbing all of the vitality from it, is eventually the cause of its death. One species of the genus, *Cuscuta racemosa*, has been very injurious in Europe, and lately in California. In Europe it appeared quite suddenly, and for ten or twelve

years was an awful pest in alfalfa or lucerne fields. By energetic measures it has almost disappeared from the Old World, and within a few years has again made its appearance in alfalfa seed imported from Chili, and cultivated in California and other parts of the country.

The pest spreads rapidly, as it radiates in all directions. Its effect is something as if a barrel of salt were dumped in the middle of a clover-field. As the rains fall, the salt brine is washed gradually into the earth in all directions around the pile; the clover becomes blighted, so in a short time a large circular patch will be left barren. Just so with the dodder. No matter how much nectar it contains, set me down as its enemy. W. A. PRYAL.

N. Temescal, Cal., Sept., 1883.

MRS. HARRISON STILL IN THE GREAT CITY.

SHE VISITS THE "MAGAZINE" FOLKS AND THE THURBERS.

I VISITED the office of the *Bee-Keepers' Magazine* Sept. 12, and had a pleasant chat with Mr. King. He showed me some Carniolan bees that he had in his office. They were a dark-striped bee, and the tips of their tails appeared to me to be blacker and sharper than other bees. Mr. King said they didn't sting. I do not know whether he meant they were only good-natured, or *stingless*. These Austrians would be poor bees for me to own, if they are stingless, for the boys broke open surplus boxes last night, and, meeting a warm reception, fled without obtaining any honey. Mr. King had also some Holy-Land bees, brought from his apiary on the roof. We had them climb a string, so we could turn them around and view them easily. We had visited Mr. King's apiary on the roof, and watched the Cyprians, Italians, and Holy-Lands, going in and out, and could perceive no difference in them. But when we had this Holy-Land bee climbing the string, we could see a difference. It looked as though it had some time or other been in the flour-barrel, or been dusted with lily-white — a yellow bee dusted with white, and a bright-red mouth.

We next visited the mammoth establishment of the Thurbers, and found it to be a great hive of industry. The different departments of trade, including desks and paraphernalia, were inclosed with wire screens, and all was activity and life. The polite usher conducted us to the "Honey Department," where we found samples of honey on the manager's desk. We requested him to show us their supply of honey, but he said their honey had not arrived, but was expecting two or three carloads this week. A sample of honey on the desk was from the apiary of J. C. Newman, Peoria, N. Y. It was in a small box glazed, and was very pretty and white; it did not join the sides of the box very closely, looking as if the bees had been playing bo-peep from side to side. It weighed one pound seven ounces. We desired to purchase it, in order to compare New York honey with white clover we had brought with us, when the gentlemanly manager presented it to us. This honey was put upon the table for tea, at our friend's house, in lieu of the white clover from our apiary. While the head of the family was eating the honey, he remarked that it must have been "dropped into soap-suds." This man knew nothing of comb foundation or its manufacture, and we mention it only as a caution to those who use suds to keep foundation from sticking. We know by the use of fdn. in surplus boxes that honey can be put upon the market in much better shape, not so liable to break or run, as without it, and the trade like it better. But if we were going to eat it, we should much prefer honey without it. When we ate this honey there was a strong beeswaxy taste in the mouth, and the wax was also discerned by others, the proof being in numerous cuds of it upon the plates. The honey itself was very light and thick, and possessed of a flavor new to us. For aught we know it might have been teasel.

Peoria, Ill., Sept. 20, 1883. MRS. L. HARRISON.

Mrs. H., I am very glad indeed to know about our friends in New York city. The idea of getting a bee on a string is a new one. Whose invention is it? you see, we want to see the bees on all sides. I have often wished that I could turn them around; but by the wings or body, it doesn't work pleasantly always. Since you suggest it, getting them on a lead-pencil would do as well. Your description of a true Holy-Land bee is, I believe, correct. The Carniolan bees, we have never seen. I think friend K. must have meant they were gentle, but not stingless. Now, Mrs. H., comb made on the modern style of fdn., made as it ought to be, does not have any thing sudsy or waxy about it. Are you sure that section came from the apiary of J. C. Newman? if I am right about it, he is a man fully posted, and also a careful honey-producer. The time has passed by, it seems to me, for comparing comb honey built on fdn. with that made by the natural process. If the fdn. is as it should be, there *is* no difference. Soap-suds has not been used for years, to my knowledge, for making foundation.

FROM NORTH CAROLINA.

ITS HONEY RESOURCES, ETC.

I CAME to North Carolina from Connecticut in 1869. I kept a few bees there with a view to a little honey, but more for sake of pleasure than profit. In 1870 I purchased a few stocks, and have had more or less, with varying success, ever since. The conditions and circumstances of bee-keeping in North Carolina are, as doubtless you are well aware, greatly different from those in Connecticut. Two things are especially noticeable; one is, that it requires more honey, perhaps two or three times more, to winter a stock in the former than in the latter, owing to the fact that the bees fly out during some days of nearly every week; and, except in unusually cold terms, several days in each week. The other is, that the honey season is remarkably early and short. Sometimes the jessamines, alders, willows, etc., are in bloom, and the bees gathering honey lively by the middle of February, and swarms issuing by the last week in March. They are ordinarily gathering honey in March, and swarming by the middle of April. I might add a third peculiarity, which is, that many plants accounted at the North to be excellent honey-producers are here of no value whatever. I set out a row of 25 locust-trees not long after I came down here, thinking they would soon yield many pounds of honey; but though they have sometimes been exceedingly beautiful in the exuberance of their blooms about Easter, I have *never seen a bee upon one of their blossoms.* I have sown buckwheat for them, which grew and thrived finely, but the bees visited it very sparingly in the early morning, and never after eight or nine o'clock. The honey season ceases as suddenly as it commences. Although there is an abundance of summer and autumn flowers, few of them produce any honey, perhaps on account of the dry hot weather. I never had a pound of surplus honey made after the middle of July — seldom after the first of that month. The bees fly constantly, and seem to be as industrious as ever, but do no more than support themselves, and keep their stores good. These things being so, it requires a little time to accommodate one's self to the changed condition of things — or, as the boy said, "to get the *hang* of the schoolhouse." Four or five years ago I began to experiment a little, with a view to work up a hive and a system which should be simple enough to commend itself to the people who were using "old gums," or plank hives, the only kind to be found about here. I have succeeded in securing their approval and admiration, but no one, so far as I know, has used the hive. My plan is to establish apiaries in the "regions round about." There are twenty little steamboats now plying between this city and the numerous places upon the different rivers and creeks which are tributary to the Neuse. I propose to put 25 hives together, in places of easy access, and visit them from time to time. I have seen bees in six places — in some more, in others less, to be evened up this coming winter. I have had no difficulty in getting places to put them. All I ask of the persons with whom they are located, is to protect them against depredations, and hive the swarms. I put on the cases at the proper time myself, and take them off. They should be put on from the middle of May to the first of June. There is a little "knack" in putting them on, which is easily learned. I can put on a dozen before breakfast, and not have a bee escape from the hive. They must be taken off during the first half of July. Ninety-six sections of honey and a swarm is a good yield for a hive.

I think I can establish 40 apiaries — a thousand stocks — in two or three years. EDWARD BULL.

Newbern, N. C., Sept. 17, 1883.

Friend B., your plan is a feasible one; in fact, we have quite a number among our readers who are managing apiaries in different localities, as you suggest. But it may require more ability than perhaps you are aware of. You can no more expect to manage forty apiaries without having grown up gradually to the business, than you could expect a schoolboy to manage algebra without a gradual process of taking the successive steps through months and years until he is able to grasp it.

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MORE ABOUT R. WILKIN.

A DESCRIPTION OF HIS LARGE APIARY, BY FRIEND NORTON.

FRIEND ROOT:—You complain that my report from San Buenaventura is a brief one; but you should consider that I had to think of the overflow of MSS. that usually comes in upon an editor, as well as of the fact that I am a stranger to you, and that better articles than mine will be the general rule. I herewith add a little to my last letter, for I found, on reading it in print, that I had said less about Mr. W. than I intended. You already have the picture of his Sespe apiary. A good engraving of it is to be found on page 208 of the A B C. More than 700 hives are at present arranged in hexagonal form with the extracting house in the center. The hives face in various directions, and the every-day business, flying and humming of the bees, is as if many swarms were issuing at once. The walks are wide and convenient, and to get to any portion of the apiary from any other portion is very easy. A four-wheeled cart is run by the operators while extracting. On this a Langstroth hive with a hinged cover is fastened for empty frames. On it, also, is room for the comb-baskets that take the full combs. Beneath hangs a pail with water and rags, for cleaning purposes. The sides of the house are composed largely of wire cloth. On one side (the side toward you in the picture) are two sliding doors, or, more properly, windows. The full combs are handed in at one of these to the uncapper; the empty ones are taken out at the other from the extractor. I omitted to say that each is on a level with a cart or wheelbarrow of average height. Within the extracting-house every thing is admirably arranged. In the end seen in the picture are kept the various small fixtures, such as rotten wood, matches, water, tools, etc.

A large tank holds the cappings. Over this are cross-bars with a sharpened iron point fixed in the center of each. With the balancing point of an end-bar resting on this pivot, the frame turns with great facility. The cappings drain into a pipe, and the honey is conveyed therein to a tank. The uncapped combs are placed in the eight-frame extractor. This is admirably geared. When once started (and it starts quite easily) it goes with surprising ease. A fifteen-year-old girl turned it during his busiest season. The comb-holder turns on pivot hinges like the leaves of a book, or, perhaps, like little doors would be more expressive. Combs are thus handily reversed without removing from the extractor.

In this connection I will mention the six-frame extractor of Mr. Lewis, of Matilija Canyon. By an ingenious device, the lifting of a rod will reverse the six frames at one stroke. He winds up a weight, and then the extractor turns automatically while he continues uncapping, till it has run down. At Sespe apiary, with the eight-frame extractor, five of us could extract a ton of honey per day without extra effort. At Mr. W.'s Matilija apiary, with a four-frame extractor, your old acquaintance, L. A. Best, and your humble servant extracted on one occasion three-fourths of a ton in a day. The honey at Sespe apiary is run from the extractor through an underground pipe to the basement of the larger house seen beyond. Here it remains in a large tank whose capacity I have forgotten. The drained cappings are placed in metal trays in a sun-extractor at the south end of the larger building. This has sashes like a hot-bed, with tin reflectors behind it. Wax cakes, and some dark, thick honey are here obtained. On the upper floor of this building are the tin and carpenter shops. All the tin work of the apiary, including the making of one, two, and twelve pound cans for the twenty-four tons raised, and additional quantities bought for shipment to England, is done there. Heretofore Mr. Wilkin has extracted none but ripe honey. Next season he intends to extract a thinner article, and ripen it afterward, something after the method of

L. C. Root, Doolittle, and others. The bees are Italians and hybrids. This season he added some Holy-Land queens for further crossing.

Let a swarm issue from a single colony, and the bees working at other hives will join it till an immense swarm accumulates. He often puts new swarms at once into three, four, or five story hives.

R. Wilkin and Nathan Shaw are two of the pioneer bee-keepers of Ventura County. They came at the same time, eleven or more years ago. They located apiaries in the valley of the Santa Clara River, where their bees had access to the wild mustard of the lowlands and the white sage of the hills. From that time they struggled faithfully for their calling, reaping rich harvests in good seasons, and bravely stemming the tide in poor ones, till others were attracted to the country in the same pursuit. Ventura is now one of the three foromost honey-producing counties in the State; and the list of her apiarists is rich indeed, including as it does such names as Corey, Touchton, and many besides. In the early days, as well as at present, grizzly bears have been great enemies of bees, such as eastern bee-keepers have never experienced; and Mr. Shaw's adventures while shooting or poisoning these depredators are interesting to hear.

If this is too long, you have yourself to blame for it; and if it is not long enough, I can add at a future time something about Mr. Wilkin's treatment of the apiary proper; i. e., the bees in the hives, together with something of the bee pasturage of this region. A. NORTON.

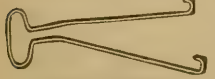
Gonzales, Cal., Sept. 17, 1883.

Many thanks, friend N. Your communication is exactly what we want, and we shall welcome the further article you allude to, and we will try to pay you something for your trouble besides.

AN AID TO CELLAR WINTERING.

DEISHER'S IMPLEMENT FOR CARRYING HIVES.

INCLOSED you will find a sample of a hook which I use in my apiary to carry bee-hives about, which I thought would be a great benefit to some of your readers. Of course, it takes 2 hooks. They are made of ⅜ in. iron, and are 1 foot long. The lower ends are one foot apart, and bend in the shape like cut, and are sharp-pointed. With a pair of these hooks, two boys can carry a chaff hive with bees into cellar almost as easily as a basket of potatoes. This is just the thing to put bees into the cellar, and I thought it would be just the right time for Oct. GLEANINGS. WM. K. DEISHER.



HIVE-CARRIER.

Kutztown, Pa., Sept. 18, 1883.

For hives that are to be carried very much, no doubt an implement like the above would be very handy; but I believe it is not customary to carry chaff hives into the cellar at all. I do not mean to say by this that it is not a good thing to do, for I think it might be found a nice plan of proceeding, for the bees would be less likely to dwindle in the spring when carried out. The hook is quite ingenious, and we tender our thanks to friend D. With the above illustration and directions, I presume any country blacksmith could make them.

ARE BEES CANNIBALS?

DO BEES CONSUME THEIR EGGS OR BROOD?

ON page 457 you have an item on bees moving, or otherwise disposing, of their eggs and larvæ. I do not believe bees rob one another of these; if they did, they would have been seen carrying them into the hive, and we would find eggs and larvæ in our queenless colonies. But I think bees may move the eggs in a hive, for I have found a *single* egg in a queen-cell remote from the brood, and this in a colony that had been deprived of a queen, to raise queen-cells. This is the only case of transferring of eggs I ever saw. But regarding your question, "What became of the eggs?" on page 538, I have been fully convinced that bees do put away with eggs during scarcity of supplies. I first noticed it a few years ago when my colonies were weak; I was anxiously watching them to see if they would strengthen up for winter. Each time I looked I would feel quite hopeful over their future prospects on seeing a good lot of eggs. But each time as I looked I found eggs and no larvæ, so I no longer counted on a frame of brood when I saw it full of eggs, and concluded that the bees foresaw that the demand was now greater than the supply, and wisely forbore becoming more seriously involved.

I noticed a similar occurrence this year, though under different circumstances. Having disposed of some queens, I put 4 or 5 nuclei together with their best frames of brood to form a colony. In 2 or 3 days from that time there was not an egg in the hive, and only a few straggling larvæ left. Again, in one of these nuclei quite a few bees clustered on the side, so I put in a frame, which had eggs and capped and uncapped larvæ, but no honey, intending to take it out shortly, but did not do so for a day and a half; when I came, the eggs and uncapped larvæ were all gone, and the capped brood was uncapped and half eaten up. Here, then, I thought, was the solution of the difficulty. They had eaten the eggs and larvæ first, and then attacked the more unpalatable capped brood. Much of it, the bees were fully formed. As soon as I gave them some honey, the partly eaten brood was left untouched. I was not surprised at the bees eating their eggs; indeed, I was almost convinced of it long ago. See with what eagerness they will eat royal jelly; and do not fowls eat their own eggs? But bees eating their young was unexpected. J. O. FACEY.

New Hamburg, Ont., Can., Sept. 20, 1883.

Friend F., it is well known that bees will destroy the young bees, and suck out the juices, when driven to it by starvation, but I do not know that they will under any other circumstances. It has been many times suggested that they devour the eggs whenever they do not wish to rear brood; but I have never heard it intimated that they also devour larvæ. It is true, hens sometimes eat their eggs, but I never heard of their eating hatched chickens, and I hardly think bees do, unless, as I said before, when driven to it by starvation. I, too, have noticed the disappearance of eggs, or, as you put it, I have noticed fresh eggs every day, and yet no larvæ. Very likely when the stores come in slowly, late in the season, they consume the eggs rather than attempt to make brood of them; and I suppose the queen soon stops laying under such circumstances.

Heads of Grain,
From Different Fields.

I SHOULD like to have you answer a few questions for me, if you will be so kind as to do so. I am a beginner in the bee business. I received from you, through Mr. Elstun, one tested and one hybrid queen, and I can say that I am very much pleased with them, especially the Italian. I want to ask you some questions about the different kinds of hives; and if you will be so kind as to answer them, I shall be obliged to you. I want the hive that is the best to extract from.

What is your opinion of the Mitchell hive? I am using six of them, but I don't think they are good to extract from, as all the frames are in the main part of the hive, and will have more or less brood in all of them. Can you extract when there is brood in the frames? I find they are very good to get comb honey from. Is there a patent on your Simplicity hive? If not, will you be so kind as to give me the dimensions of it, and the Langstroth, and how to make them.

I have a friend here who takes your GLEANINGS, and I take the *American Bee Journal*. We swap reading, so you see we get the benefit of both.

Increase in bees and bee pasturage was very great here. Mr. Elstun increased from 18 to 65; Mr. Bowles, from 2 to 12, and several others did as well.

Milroy, Ind., Aug. 25, 1883. J. A. SMITH.

Friend S., the Mitchell hive is a one-story hive — that is, the frames are spread out sidewise, instead of having a part of them over the other part. That style of hive was tested very extensively ten years ago, under the name of the Adair, or "New Idea" hive; but it has been abandoned almost universally. I hardly know of a large honey-raiser who uses it now.— We can extract from brood-frames just as well as any other. But you will see by the price list that I have advised not doing so, because of the danger of letting the bees starve.— There is no patent on the Simplicity hive, or on any thing that we make in the way of hives and implements. Our A B C book gives you full measurements of every thing, and also very plain directions how to make them. I am glad to know that you and your kind neighbor exchange journals. It indicates just the kind of a neighborly feeling that ought to exist, not only among bee-keepers, but among all neighbors.

SUMAC AS A HONEY-PLANT.

Can you or any of your many readers tell me whether the sumac is a good and reliable honey shrub or plant ? There are places in Southwest Missouri where a man could get the benefit of hundreds of acres of sumac. It is in bloom from the first of June to the 10th of August. I saw comb honey there the 10th of August that was as white and fine-flavored honey as I ever saw, that was supposed to be sumac honey. I found no person who could give me positive information in regard to it. Friend Dougan, of Seneca, Newton Co., Mo., thought sumac furnished large quantities of honey, but was not sure. By the way, friend Dougan has a fine little apiary of Cyprian and Italian bees, and is perfectly at home among them. His Cyprians appeared to be gentle and quiet, but I don't wonder at it, as he appears so pleasant and agreeable that his bees could not be otherwise than good-natured. He has the Simplicity and chaff hives, and was the only man I saw in Southwest Missouri who used the movable frames and improved hives, etc. North Missouri is rich, and in good trim for winter; but a drought set in about the 12th of August that cut our surplus honey about a half short.

ALEXANDER FLOYD.

Guilford, Mo., Sept. 12, 1883.

Sumac has often been reported as one of the best of honey-plants, and I believe that large crops of nice honey are often taken from it. By consulting our back volumes you will find many reports.

The three-dollar Italian queen which I ordered from you arrived here on the 23d of August, and I proceeded to introduce her immediately, according to directions on the cage. At the end of three days I made a hole through the comb, and let her out, and she seemed to feel quite at home; and I think that she commenced laying within 24 hours after being liberated. Present appearances indicate that she will have a large stock of young bees before winter begins. I feel well pleased with the result so far, and begin to feel in a hurry to see the "yellow-jackets" begin to crawl out and fly.

BEES THAT WON'T DEFEND THEMSELVES.

I think that I shall have to send you another order, for I have another colony that appears to be without a queen. Have tried to keep the colony strong by giving them brood from other hives, but the neighboring bees seem to come and carry off their stores of honey with impunity, and they make scarcely any effort to defend themselves. There appears but little chance of saving them from destruction, unless it can be done by giving them a queen. I suppose then they would be more resolute in protecting their stores.

WINTERING QUEENLESS COLONIES.

Please tell us whether a swarm of bees could be successfully wintered through without a queen.

SKUNKS AS AN ENEMY.

I have been seriously plagued this summer and fall by skunks destroying my bees. Some colonies that seemed to be full and strong would, in a few days, appear to be dwindling away, and the hive almost inactive, when I was sure no swarm had been sent out, and I was at a loss to know the cause until one moonlight night my attention was attracted toward something around one of my hives; and as I approached near to it I discovered that it was a skunk standing by the side of the alighting-board. When a bee made his appearance outside of the entrance, Mr. Skunk would brush him off on to the ground with his paw, then catch him in his teeth, and eat him. I watched until I was fully convinced of what had become of my bees. Is it a common thing for skunks to eat bees? JOSHUA BULL.

Seymour, Wis., Sept. 13, 1883.

I have never failed in making any colony defend themselves when I gave them combs of brood enough from other hives. In fact, this can not fail; for when the bees hatch out we have a new race of bees instead of indolent ones. A swarm of bees can be successfully wintered without a queen; but in order to have plenty of young bees, which are a necessity, they should have a queen till just before winter sets in.—Thanks for your report in regard to skunks eating bees. We have had several similar reports in times past.

QUEENS THAT WERE NOT ALLOWED TO LAY.

On the 8th of August I introduced (for a neighbor) several queens; and three days later, upon examination, I found in the colonies no indication of a queen (eggs), but queen-cells instead, and I came at once to the conclusion that they had killed their new sovereigns. I very carefully cut out all of the cells, with the intention of trying once more as soon as queens could be had. You can imagine my surprise, when, ten days later, they swarmed; and still more was I surprised to find in each swarm the queen I had introduced and was mourning over as lost. They began laying at once as soon located in their new home, but not an egg could be found in the old colony. Why those queens should go 13 days in the old stock and not lay an egg, and should commence at once after getting in the new hive, is more than I can see through. It would seem as though a part of the bees mourned the loss of their "nimbus;" that they were aware of the fact, that "all is not gold that glitters," and so interfered with the operations of the new layer. The rest were undoubtedly reconciled to the change, and, after spending 13 days in debating the question, concluded to move out—to go west, and grow up with the country.

FERTILE WORKERS.

It is generally supposed that fertile workers will neither accept a queen of any kind nor a queen-cell, and the only sure cure is to unite with some strong colony. It is said, there are exceptions to all rules, and in this rule there seems to be one surely, for I have had this season a nucleus infested with fertile workers that twice in succession reared a queen. They seemed to accept a queen-cell as readily as *any* colony would.

We have had a poor season here. Through white clover it was cold and rainy, and the fall yield promises to be a complete failure.

HOLDING SWARMS BY BROOD.

I have been considerably interested in what Doolittle and others have had to say in regard to the efficacy of brood in detaining runaway swarms. My experience goes to prove that brood will hold a swarm when queenless, but if they have once made up their minds on an old hollow-tree, nothing but a good fountain pump well used will stop them.

Roger's Park, Ill. J. V. WOODRUFF.

Friend W., your case is a rather uncommon one, but still I have seen behavior somewhat similar. As a rule, the building of queen-cells indicates queenlessness, but not always; and when we find them building cells in spite of having a laying queen in the hive, it is a pretty sure indication that there is mutiny in the ranks, and sooner or later they swarm out or ball the queen. It seems a little singular that you had two colonies that behaved in exactly the same way. I know that we often decide a queen is lost, and afterward find her, or, rather, find by the eggs present that she is still in the hive.—A colony infested with fertile workers will often accept a queen-cell and sometimes a laying queen, without any caging whatever.—I am well aware that brood will always keep bees from deserting a queenless and broodless hive, and a frame of young larvæ will almost invariably induce a colony to defend their stores where they would not otherwise.

MOVING BEES NORTH TO KEEP UP WITH THE BASSWOOD FLOW.

I read in your last issues of GLEANINGS and JUVENILE of moving bees northward to keep pace with the receding bloom. Basswood is our last bloom here, and commences to bloom here from the 12th to the 15th of June; this year on the 14th of June. It lasts from three weeks to one month; this year, 33 days exactly. The rest of the year, bees will not make a living, always, and frequently 100 lbs. of honey will not carry a swarm through till the following spring. There is but one successful plan here, and I have practiced it with satisfactory results. Colonies must be depopulated after the basswood dries up. A small colony here gathers enough to breed upon, while, if left to themselves, they consume all their stores in brood-rearing.

Now, friend Root, if I can not make arrangements with Northern men to take these surplus bees the 10th of each July in each year, they will have to be subjected to the brimstone pit to the amount of 7 or 8 lbs. to each hive, as a matter of necessity. They raise an abundance of brood after this for winter here. If I could make arrangements with you to take from 5 to 8 lbs. of bees from each of my hives the 10th of each July, I would put them up and guarantee safe arrival to you, for 50 cts. per pound; and if a queen is required with each, will furnish them for 60 cts. each. A. W. CHENEY.

Kenawha Falls, W. Va., Sept. 20, 1883.

Friend C., I am much obliged to you for your liberal offer, but with the amount of business I have on hand now, I would not dare to promise to take your bees, though there are doubtless some among our readers who would be glad of them at the price you mention.

CAN WE PREVENT THE BEES FROM BUILDING ON THE TOP-BARS?

In regard to the bees sticking up the frames and building little pieces of comb around the edges and tops of the frames, can't we melt the wax, and flavor it with something, and coat the frames with it, so as to keep them from working where we do not want them? I am using some of the metal corners, and I like them much. G. D. ADAIR.

Talbotton, Ga.

Friend A., your plan of covering frames with melted wax containing something distasteful to the bees would be a great deal of trouble. If you want the top-bars clean, plane them smooth and paint them. As a rule, I believe bee-men do not want tops unattached, for we want the attachment you speak of to induce the bees to go up into the sections above. If you had clean top-bars they would be much less liable to do so.

KING-BIRDS EATING BEES.

Do what we call king-birds catch worker-bees? I saw them catching my bees; and, going to a neighbor's orchard, I followed and found two nests—one with eggs, and the other with three nearly full-grown birds, which I decapitated, and proceeded to hold a post-mortem, which resulted as follows: I found several drones intact, also 3 or 4 large green bugs, larger than potato-beetles, with a mass of partially digested bees, of what kind I could not tell. Now, should these birds be killed or not?

Italy, N. Y. A. F. ROBSON.

Friend R., I should be very glad indeed to think these birds eat drones only. See what is said about them in the A B C book. I think, if you will look over carefully the mass you mention, you will find stings in it, and drones never have stings, you know.

QUEENS FOUND NEAR THE ENTRANCE.

I have 4 stands of bees — 3 Italians and one Holy-Land. I like the Italians best; think they are the easiest to handle. As I was passing one hive I saw quite a number of bees on the alighting-board, and outside of the hive; and on looking closer I saw the queen crawling slowly away from the hive. I tried to make her go back, but she would not; so I took her with 6 bees, put them under a glass, and took them in the house. One side seemed to be paralyzed, and she soon died, although the bees licked her all over, and tried to feed her. I examined her with a microscope, but could find no bruise or sting anywhere. What do you suppose was the trouble? I don't know how old she was. There was brood, but no eggs in the hive. The bees were very much excited while I was lifting out the combs. A lot of them crawled inside my coat-sleeves, but only one stung me when I pinched her. A. J. HAYNER.

West Sandlake, N. Y., Sept. 21, 1883.

Friend H., I think you will find a good queen in the hive, even though you do say you find no unsealed brood. At this season of the year, old queens are frequently driven out of the hive, and sometimes found dead at the entrance; but as a rule a young one will be found inside. She may not produce any brood this year, for queens often stop laying at about this season, and sometimes even brisk feeding will not cause them to commence again before spring. I would look the hive over very carefully before deciding it to be queenless. If it really *is* queenless, of course you will have to get a queen somewhere, of some kind or other, in order to winter them safely. It is true, they will do very well if a queen is given them very early in the spring, but I would hardly think it advisable.

BEES THAT WON'T RAISE A QUEEN.

Did you ever know or hear of a queenless colony of bees that would not raise a queen, when brood was given them? About the 15th of Aug. I discovered that one of our colonies of black bees was queenless. I gave them brood at once from one of my Italian stocks. The next day I opened the hive, expecting to find a nice lot of queen-cells started, as it was quite a large colony, but they had started none. Thinking that perhaps I had made a mistake, and they were not queenless after all, I made a thorough examination of them, looking the combs all over, but there was no other brood in the hive, except what I had given them, and they had started queen-cells on the edges of the combs where there was no brood. I gave them brood several times, but they would not raise a queen. The brood that I gave them was all right, for it hatched into workers in due time. As it was late in the season, I concluded to unite them with another colony, but I was very busy, and neglected to do so for a few days. The next time I opened the hive, almost the first comb I lifted out contained eggs, and lots of them too, but I saw at once they were not laid by a queen, and concluded they must be the eggs of fertile workers. The eggs were scattered around in the cells just as it happened. Some cells contained several and some none at all; some were attached to the sides of cell, instead of the bottom, where the queen lays them. But I stopped this business at once by uniting them with another colony, and I had no more trouble with them. O. G. RUSSELL.

Afton, N. Y.

Friend R., it is not unusual for colonies having a fertile worker to refuse to raise a queen. That is one great reason why we consider fertile workers bad to manage. Had you given them several frames of hatching brood, the bees as they hatch out would ordinarily start queen-cells. I have given your letter, chiefly because it describes so well just the way in which fertile workers behave, or just the way in which colonies having fertile workers usually behave.

A REPORT FROM WEST VIRGINIA.

As we seldom see any thing in GLEANINGS from this State, I will give a few items. West Virginia as a honey State will not come up to some of the Western or Southern States; but if it had more Doolittles or Houses there would be more honey produced than there is now. There are about 400 colonies of bees kept in this county (Marion); about 100 are kept in Simplicity hives, as many in American, and about 200 in various other kinds, but mainly in the old box hive. This summer has not been a good honey season here. Fruit-bloom and poplar-bloom furnished a fair supply of honey; but the heavy rains during the white-clover bloom destroyed a great amount of honey from that source. Basswood furnished more honey than any thing else, but it is confined to certain localities. We never get any surplus honey here after basswood is out of bloom. The average yield of honey, so far as I can gather, is 35 lbs. per colony, spring count, comb honey. The extractor is not used in the county, to my knowledge.

AT WHAT RATE CAN BEES FLY PER HOUR?

I see this matter discussed, so I will give my experience. I have a field of buckwheat situated something less than half a mile from my apiary, with no timber between. Now, for me to place myself at about an equal distance between the buckwheat field and apiary, on a still clear morning, I can hear a constant humming of bees, going to and coming from the field, and I can occasionally get sight of a bee, which, upon comparing with the flight of a wild pigeon, I think fully as fast. It is said by Morris, in his work, "Science and the Bible," that the wild pigeon flies at the rate of 60 miles per hour. I have been very careful in my observations, and am sure that I am not mistaken in comparing their flight. I have no doubt bees can easily attain 90 miles per hour in flying longer distances.

Now, with due respect to Mr. Shotwell's experiment, as given on page 435, I think his test was not a good one, as the air in a car is carried along at the same speed the train is moving, and a bee could as easily reach the window in front of the car, as if the car stood still. L. H. WILCOX.

Farmington, W. Va., Aug. 10, 1883.

Friend W., are not you and many others making a mistake in regard to the rate at which carrier pigeons fly? While on the cars my eye caught a report of carrier pigeons owned by sporting men. Of course, these pigeons were expected to be speedy, or notes of their flight would not be given. Figures were given of quite a number of different birds; and although they seemed to think the results were great, none of them exceeded 25 miles an hour. But this was on a test stretch of over 100 miles. Have we not a sporting man among our readers who is conversant with carrier pigeons? If so, let him speak out. Do they fly 60 miles an hour, or only 25?

PERIOD OF BASSWOOD BLOOM IN THE SOUTH, ETC.

I will answer the question on page 571. We have basswood bloom here from the 1st of May until June. Started in the spring with 5 colonies; increased to 8, and have not got any honey yet. It was so cold and wet in the spring that bees could not get out to suck basswood bloom — only from sawood bloom. It did not rain any from the 25th of June till the 15th of September; so you see bees could not do much. Sawood blooms from June 20 till August: then there is nothing that will bear or yield honey till September. I will send you some flowers and leaves of a plant from which my bees are making lots of honey, and I also send you the twig of another plant from which my bees are getting pollen by the pound. You will please give me the names of these plants. The latter is called the charet weed, but the other has no name here. It blooms the first of September till frost. I see much about goldenrod in your journal, but I never saw a bee on the bloom here yet, and I don't believe it yields honey here.

J. A. DILLAHAW.

Bowman, Elbert Co., Ga.; Sept. 20, 1883.

Friend D., your honey-plant is one of the large family of asters. The one that you say yields pollen by the pound is the well-known ragweed. With us, bees get pollen from it only occasionally. I usually see them in the morning, perhaps three or four days in every season, gathering pollen from ragweed; and sometimes they gather very rapidly from it. Do you not mean by "sawood" what is generally termed "sourwood"?

RIVER-BOTTOM LANDS FOR BEE FORAGE.

I live in a large bottom surrounded by a levee; and of all the places for bees, this is one. Although I and my father have had bees all the time for three years, we have not made much from them, on account of old-fogy notions; but of late I have turned my attention to something new, and have about got father out of the "old-fogy," but not in all things. He uses your smoker to perfection, and has made some movable-frame hives, and reads GLEANINGS. I have my bees all in movable-frame hives. Both of us now have 130 stands, and have sold lots of honey at from 15 to 20 cts. per pound — mine in frames, and his nearly all in caps.

WM. ROUSE.

Shepard, Ill., Aug. 24, 1883.

Friend R., I have often thought of keeping bees on this low land surrounded by a dyke or levee. The soil is usually remarkably rich, and furthermore it seems to me it would be a very simple thing indeed to have arrangements for irrigation. Has this matter ever been developed? — Don't be too severe on old fogies. If old-fogy ideas exist in our neighborhood, it is, to some extent, our fault. Talking is not always the thing to be done; but faithful, steady work will bring a reward anywhere.

HOW TO MANAGE SECTIONS DURING THE HONEY-FLOW.

We aim to have at least one frame of sections partly worked out to put in each hive when we put the sections on in the spring, to induce the bees to work, which they will do if there are lots of bees and honey. We tried part of our frames without separators last year, but will do so no more. Place the frame between cleats nailed on the bench, to hold it square; drive a little wedge between a cleat and one end of frame, so as to spring the latter in a little; nail on your separators with four wire nails in each, and the frame will stay square, and the tins tight; when the little wedge is withdrawn, put in your sections, and if they do not fit in tight, wedge them up. This will hold the sections square, and prevent the bottom-bar from sagging.

TO GET THE SECTIONS OF HONEY OUT.

Lay the frame, tins up, on a table; run a knife in between the top-bar and sections, just in the middle; give the knife a twist; this will loosen the bar from the sections the whole length. Do likewise at bottom and ends; also loosen the tins where they are stuck to the sections, by raising them up in the middle. Now raise one end of the frame; with the other hand and knife shove the sections loose, down and out, by pressing in the corners of frame with knife. It is too slow to get one section out first, when all can be got out just as quickly.

SUNSHINE AND HONEY.

The bees in Simplicity hives that stand in the sunshine part of the day have made us more honey this year than those in the shade. Is this always so? who knows for a certainty?

20 C. PER LB., 18 C. PER LB.

Our first honey brought 20 cts. in Chicago this spring. Some old honey shipped at same time sold at 18 c. Why is it quoted at 12 to 14 c.?

Penrose, Ill. J. SYKES WILSON.

Thank you, friend W., for the fact you furnish in regard to hives placed in the sun. I am quite well aware that there are times when letting the sun full on the hive would increase the amount of honey stored; but if I am correct, there are also other times when this full blaze of the sun makes the hives so hot that the bees are driven out, and work stops. Ventilation would, however, I presume, fix this latter point; and you will recollect we have had discussion in regard to this very matter by Langstroth, Grimm, and others. Now, then, it seems likely that the intelligent apiarist will have to keep a careful watch, and guard against both extremes — take advantage of the sun whenever it is needed, and ventilating or shading when the bees are too hot. It is some trouble, I know; but it will pay. Thanks for your fact in regard to handling sections.—In regard to the honey market, in our last number you will find comb quoted at from 16 to 18 cents. It is comb you allude to, is it not? Perhaps you retailed yours out. Of course, it will bring more in that case.

PRICKLY ASH AS A HONEY-PLANT.

I mail you a sample of the blossom and leaf of one of the best honey-producers, I think, that I ever saw for this scarce season of the year. The only name it has here is prickly ash. It comes in bloom the 20th of August, and is now in full bloom, and will last 10 days longer. It grows in small trees about 6 inches in diameter, and about 12 feet high. I see them grow here in different soils, and wild, rough places; the older stalks sends up numerous sprouts off from the main tree, which bloom the second year. The pod resembles that of sumac, only much larger. They get as large as a bushel basket, and the bees work very strong on them from morning till night. The pod produces seed. I never tried whether the bush could be raised from it or not, but I should think it might. S. P. RODDY.

Mechanicstown, Md., Sept. 9, 1883.

I have been wanting to write to you for some time; and when we read you had a six-weeks-old baby, the temptation was too great to be resisted. I congratulate you, with all my heart. If there is any one thing I have a liking for, it is a little soft sweet baby. We have one almost three years old. She is a great admirer of little Blue Eyes in the A B C book. My husband takes GLEANINGS, and we both read it very thoroughly. I tell him your views are sound on the subjects of temperance and religion, and we would be made better by knowing you. We have about 30 swarms of bees; have taken off over 100 lbs. of section honey, and, "there's more to follow." I am not a bee-womann, or ever want to be, their stings hurt me so; but my husband does not mind it, even when they sting his nose until it looks like an elephant's trunk.

A SUGGESTION ABOUT CANNING IN GLASS.

One thing I will mention about putting honey or fruit in glass cans for canning. Just wet a cloth in lukewarm water, and wrap around the can, and you can pour boiling hot sauce or honey in without any danger of breaking the can. It has saved me lots of trouble heating cans, and it may help some one else.

Rupert, Vt. MRS. L. SHELDON.

A FEW WORDS FROM THE SUMMIT APIARY.

Great dearth in the honey supply. Bees have barely honey enough to live on; drones by the thousand. If anybody had wanted drones I could have supplied him with a large amount.

DRONES; CAN THEIR REARING BE STOPPED?

I went out to the apiary a few days ago about sundown, and saw quite a large bunch of bees near the entrance. On examination I found them drones. Not having the password, they could not go in.

Clio, Mich. JAS. A. SHELDEN.

To be sure, the raising of drones can be stopped, friend S. Since the advent of fdn. the matter is easily under our control. Give the bees all worker combs, and you will find it a very great saving of money, compared with killing them after they are full grown and fat and lazy, or even slicing their heads off when they are in a state of capped brood, as we used to do.

TWO QUEENS IN THE SAME HIVE.

No new subject, I hear you say. Not at all. I have even had three old queens to remain for several weeks in the same hive that had, with their bees, been united in the spring of the year. But I never saw two young queens abide in peace in the same colony. On my way a few weeks ago to visit the Shenandoah Valley, Va., with a view of learning something about the honey resources of that far-famed place, I met a friend, Emerson Henderson, a young man of quite a little experience in bee culture, who related the following: "I had three second swarms come off about the 4th of July, which were all hived together. Some days after, I examined to see if the young queen was all right and laying, and, to my wonder and surprise, discovered, on the same comb, two plump young queens busy depositing eggs. I often look to see how they get on together, and frequently see them meet and pass, showing no disposition to dispute the sacred ground." It is not at all rare to find an old queen and daughter harmoniously dwelling, for a time, together. Whether both at the same time are in a normal condition, I have not yet decided; but I think this case reported by friend H., of two young queens in an apparently normal condition living harmoniously together, is a new departure. It is to me, anyhow.

J. A. BUCHANAN.

Holliday's Cove, W. Va., Sept. 19, 1883.

FROM THE ROANOKE APIARY.

As I see letters from a great many of the A B C class, I concluded to write one too. I began bee culture in July, 1882; bought 3 colonies in old box hives; found 3 trees, and cut and saved the bees. I have taken 4 colonies on shares, all in box hives. During this summer I got two swarms only, making in all 12. Bees did not do well this year. In the spring, when bloom was plentiful, the cold, high winds kept the bees housed, so they lost nearly all the honey crop. When it got warm and still, it turned off dry, and has been so ever since, and now they can't get any thing at all, only as they get it at our table when meal time comes. You may guess they then get their share, although they drive me and family out and take possession of the table until I get Mr. Cold Blast after them, and then "you bet" they scatter, and we get a sip once in turn with them.

I took 75 lbs. comb honey from my bees when I transferred; sold at 16⅔c. I sent to Mr. Root for two $1.00 queens. I think I can raise queens for all my colonies, then I shall raise some for sale if they prove purely fertilized. I raised some queens this summer, and think it easily done by one who understands the business. I am using the Simplicity hive and metal-cornered frames. W. J. CROWLEY.

Roanoke, Texas, Sept. 14, 1883.

CORN HONEY.

On page 625 of GLEANINGS for Dec., 1882, in reply to Mr. T. M. Fort, you came nearer being a scientist than you thought, perhaps. Why? Because, on the 8th and 9th of this month there was frost enough here to kill almost every green thing. Corn was frozen badly, and farmers went right to topping and cutting it up. Now comes the bee part. One man told me that his cornfield looked as though there was a swarm of bees in it, after he had cut his corn up. The bees were at work on the starch in the stubble, "turned to grape sugar by the frost," as you put it. Bees worked 4 days here on the above plan.

GRAPEVINES FOR SHADE.

I have often thought of trying your plan of having grapevines for shade; but when I go to a hive I like to be able to get all around it, if I wish to.

The stones represented in the picture, on our shade-boards, are about one-half the time left off, and the same shade-board is the cover to our winter packing-boxes, so you see they answer two purposes. W. H. SHIRLEY,

Glenwood, Mich., Sept. 18, 1883.

SWARMING WITHOUT CLUSTERING.

I know that bees will swarm and go to the woods without clustering. When I was a young man, over 40 years ago, my father had an old box gum that the bees hung out of for 3 weeks. We watched them closely. One day after dinner, father and I were sitting close to them, watching them, when they began to swarm; and before they all got out, the first out started for the woods. I started with them on the double-quick, and kept up with them for about 300 yards, when they struck the timber and rose up above the trees, and were soon out of sight and hearing. My father said some of the last that came out started, but, not finding the body of the swarm, came back to the old gum. I had one of my own, which, as soon as they all got out of the hive, started off. I went with them; they went straight to a tree, and went in it. I cut the tree and got the bees.

Belmont, Neb. WM. ALLHANDS.

QUEEN-CELLS IN THE PRESENCE OF A LAYING QUEEN.

Looking into a hive the other day, I found a fine large queen-cell started, where one of my best queens belonged; and, of course, I thought I had lost a valuable queen. But upon looking through, I found her all right, and laying. How is it that they would start a queen-cell, and at the same time have a queen among them? I removed the frame with the queen-cell to another queenless colony, and they have finished it up. I bought out friend Draper, thereby falling heir to his subscription to GLEANINGS and the A B C book; which, by the way, came through all right, and is just the thing needed by persons as ignorant in bee culture as—

MRS. NETTIE C. LOCKE.

Farmington, New Mexico, Sept. 21, 1883.

My good friend, if you will examine our back volumes you will see that this is not an unusual occurrence. Queens whose bees will keep a queen-cell in the hive are valued very highly, because these cells can be taken out, and used as needed. Several queens have been reported that would keep a laying daughter in the hive; and Doolittle pronounces such queens equal to any.

THE DEVELOPMENT OF THE STANDARD LANGSTROTH HIVE AND FRAME.

MR. LANGSTROTH'S EARLY EXPERIENCES.

THIS form of hive was the result of many experiments. In the spring of 1852, as early as the weather would allow the bees to be shaken from the combs of my bar hives (18⅛x18⅛ and only 6 inches deep), uprights and bottoms were nailed to these bars, so that in a few minutes they became movable-frame hives. In the latitude of Philadelphia, at least, I never knew good colonies to increase faster, if as fast, than in such shallow hives.[*]

Not to speak of hives 13x13x13, whose cubic contents were about the same with the standard Langstroth, and of other discarded sizes, I made, in 1854, hives 12x12x36, with frames now called "Gallup frames." The surplus honey was taken in boxes or frames in the rear of the main breeding-apartment. They had movable tops as well as movable sides. The side doors, being chamfered on their edges, in opposite directions, could always be easily opened, and being suspended like frames, by top-bars upon the frame-rabbets, the size of the hive could be changed at will. Two such hives were placed, Dzierzon fashion, side by side — with entrances in different directions; crosswise on these, two more were placed similarly, and the pile continued, in the same fashion, as high as could be conveniently reached for manipulation — the whole colony having a common movable roof. Although my judgment was against such an arrangement, I could not rest satisfied until I had given this system a fair trial, and proved, by actual experience, that the necessary manipulations were so tedious as greatly to outweigh the advantages promised by such a compact arrangement. However it may be with our German friends, with us economy of *time* is of vastly more importance than economy of *space*. I, therefore, took down the stack, and used the hives as top as well as side openers, until I left New England. I also used frames even larger than the Quinby size, but found them objectionable, because of the weight of the combs when full of honey.

These facts are sufficient to show that the standard Langstroth hive was not the result of mere theoretical notions, or traditional prejudices, nor did it come by what some would call a chance "happy go lucky" hit. Born out of my experiences, it was deliberately adopted, with the knowledge that at that time the great majority of our best bee-keepers did not approve of such "low flat things." So deep was my conviction that its shape was better than the approved forms, that I could not consent to recommend any other.[†]

Although the chief reasons for the shallow form have been often given, it may be well, in this connection, very briefly to repeat them. Those who wish to see the subject more fully discussed, are referred especially to the old volumes of the *American Bee Journal*, where they will find the merits and demerits of the standard Langstroth hive very thoroughly canvassed.[‡]

My tenacious adherence to the Langstroth form led some to imagine that perhaps, in some way or other, the validity of my patent might depend on this shape. This reminds me of a once noted writer on bees, who, while warning persons against infringing upon his patent (although he had never taken out a patent), closes thus: "Even an external imitation of my hive will not be suffered to pass with impunity!"

The broad and low shape which I introduced, in addition to giving the much-desired top surface for surplus-honey receptacles, has the following advantages:

1. It is obviously much better adapted to the use of upper stories, than taller hives. It seems more natural to bees to place their stores *over* their central brood-nest, than anywhere else. When extracting unsealed honey, I kept neither honey-board nor any thing else over the tops of the frames to interfere with handling the frames, as soon as the roof over them was removed. A glance at the tops of the frames was enough, with Italian bees, to show if extracting was needed, for they would begin to ex-

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[*] Bingham, Marvin, and others, prefer hives about six inches deep.

[†] In latitudes where bees can be either safely wintered in the open air, or in proper in-door depositories, a still shallower form of hive may, perhaps, be found preferable.

[‡] Of all editors whom I ever knew, Mr. Samuel Wagner was the most judicial in his attitude on all matters pertaining to bee culture. Fair play was to him a precious jewel indeed.

tend their comb-building upward, even if they had plenty of room for this work on empty side frames. Now, why should bees attempt the difficult work of upward comb-building, against the law of gravity, by which their suspended combs are kept in a perpendicular position, while they have ample side room for building them in the natural way? Why, I say, do they act thus, unless it is most in accordance with their instincts to place their stores above the brood-nest?

If honey, to have its choicest flavor, ought not to be extracted — as the Dadants and others of our leading apiarians assert —[*] before it has been capped; and if, when all bee-work is most pressing, more colonies can be taken care of by piling hive upon hive, filled with empty combs — to be emptied when more leisure comes — then the advantages of shallow hives are easy to be seen.

2. If we do not make the number of frames so small that, to get the requisite comb surface, they must be too heavy for easy handling, then for cheapness, and other obvious reasons, the fewer frames the better. For this reason, if there were no others, frames of the Gallup size seem to me objectionable.

3. Long and shallow frames are more convenient for most of our necessary manipulations.

(*a*) In handling them the arms take a natural and easy, instead of a cramped position.

(*b*) With such a frame the eye commands the whole surface of a comb, in searching for the queen, etc., without that uncomfortable craning of the neck which deep frames compel.

(*c*) As has been already explained, there is less danger of hurting bees in removing or replacing the shallow frames.

(*d*) Less motion, and of course less time, is needed to take out or put back such frames.

(*e*) It is very much easier to make such frames hang true, than deep ones. If their hives had glass on their backs, many who use deep frames would be surprised to see how much "out of true" they often are.

Whatever may be the case with bee-keepers, in a small way only, those who are manipulating for hours together, in large apiaries, and to whom, in the press of work, time saved means more money, than in any other season of the year, will find the above reasons for giving the preference to the long and shallow frame worthy of careful consideration. They are submitted, however, in no spirit of dogmatism, and I am far from claiming that the standard Langstroth is *demonstrably* the best under all conditions, and for all parts of our widely extended country. The time will probably never come when uniformity will be as much insisted on as in the standard weights and measures of the same country. If by a simple volition I could, without pecuniary loss to any one, or violence to any one's feelings or prejudices, change every movable-comb hive in America into the standard Langstroth size, I would will no such change. Let the Dadants, Hetheringtons, and others, have full scope for testing on the largest scale their different forms, only let there be, as far as possible, *uniformity in each style*, so that any purchaser will know precisely what size, under a given name of hive, he is getting. I am sure that Mr. Root, and others, will be willing, when requested, to make hives of the standard Langstroth size; and if Mr. Root will call his size of frame the *Simplicity-Langstroth frame*, there will in the future be plain sailing, at least before all who use the shallow Langstroth frame.

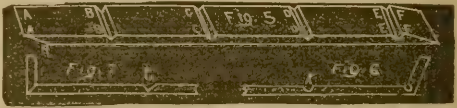
L. L. LANGSTROTH.

Oxford, Ohio, Sept., 1883.

JAMES FORNCROOK'S PATENT ON SECTIONAL HONEY-FRAMES.

AND SOMETHING ABOUT PATENTS IN GENERAL.

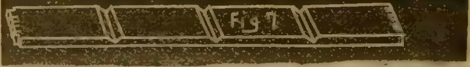
As considerable interest has been manifested in this matter, and as a wholesome lesson can be gathered from it, I will present the matter to our readers as it now stands. In 1870 a patent was granted to Wm. Gilbert for an improvement in making boxes of one piece of wood. The cut below is an exact copy of his claim, and shows the way in which the strip of wood is grooved that it may be turned up and nailed together.



We make the following extracts from his claim:

> Be it known, that I William Gilbert, of Catskill, Greene County, State of New York, have invented a new and useful improvement in the construction of wooden boxes, for service as fruit-boxes, salt-boxes, spice-boxes, housekeepers' boxes, ladies' work-boxes, or for any use where light strong boxes are needed. My present object is to save the expense of construction-labor in forming the angular joints at corners, and making them without a break, in the cheapest and promptest manner.
>
> The sides are prepared by getting out and properly dressing strips, Fig. 5, of the material, which may be of any kind of wood having toughness enough of fiber for that purpose.
>
> These strips are made of the proper width for the sides of the box. * * * The thickness is from two-sixteenths to three-sixteenths of an inch.
>
> The strip thus prepared is next subjected to a soaking in hot water, or a steaming, in order to insure the bending of the wood without breaking its fiber. The above-described method of construction, it must be manifest, is one which will introduce a better and cheaper article of its class into use and sale, than has been or is now in market; in other words, a new, better, and cheaper article of manufacture.

Well, friends, this combines pretty nearly the principal point in Forncrook's honey-box made of one piece of wood; but in the year 1874 one H. W. Hutchins, of East Livermore, Maine, got a patent on the idea of dovetailing the ends instead of lapping or gluing them, as Gilbert had done. We give below a cut of the Hutchins patent.



This effectually disposes of the plan of making boxes of one piece of wood, and folding them up so that the dovetailing ends may lock together, and, of course, all that remains for Mr. Forncrook to get a patent on is the insets to give an entrance to the bees, and the groove for inserting the strip of fdn. As the latter has never been used by us (for we consider the Parker fdn. fastener a much better way), friend Forncrook has nothing left to commence a suit on, except the notch to give an entrance to the bees. This notch Fiddes used in 1873, as I have shown you on page 507. In a personal talk with Mr. Forncrook he admits all that I have given above, and defends himself by saying that both Gilbert and Hutchins got their patents on a box for holding fruit or other purposes, but did not at the time contemplate a honey-box. By referring to page 508 of the August JUVENILE, you will see that the Gilbert box was used as a honey-box, and the *A. B. J.* so reported it in 1879, and Gilbert expressly says in his patent, as you will note above, "Or for any use where light strong boxes are needed." That you may know exactly what Mr. Forncrook has patented, we give below a full copy of his claims, and drawings of his section.

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[*] I use the word apiarian both as adjective and substantive, without the authority of Webster or Worcester, because it sounds much better than apiculturist, and is repeatedly so used by Dr. Edward Bevan in his work on the honey-bee—than whom there is no writer on bee culture who is higher authority among English-speaking people.

UNITED STATES PATENT OFFICE.

JAMES FORNCROOK, OF WATERTOWN, WIS.

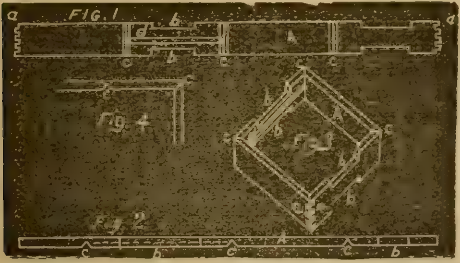
Sectional Honey-Frame.

Specification forming part of Letters Patent No 243,674, dated June 28, 1881.

Application Filed May 13, 1879.

To all whom it may concern :

Be it known, that I James Fornerook, of Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful improvements in Sectional Honey-Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.



This invention relates to an improvement in Sectional Honey-Frames, the object being to so construct them that they shall be stronger, and in a more portable form, than the frames now used for such purposes; and the invention consists, essentially, in forming the frame from a single blank or piece of material having all the necessary grooves and recesses required to form a complete frame cut in it, the ends of the blank being notched or dentated, and angular grooves cut across it at those points which are to form the corners. These blanks, after being thus prepared, may be packed solidly in boxes or otherwise for transportation, and when required for use are bent into the square form, and their ends united at one of the corners by means of the interlocking notches or teeth, thus forming a complete frame ready for use.

In the drawings, Fig. 1 is a plan of one of the blanks, showing the various recesses and grooves with which it is supplied. Fig. 2 is an edge view of the blank, and shows the form and depth of the angular grooves which form the corners of the frame. Fig. 3 shows the blank bent into a square form with the ends united, making a complete frame ready for use. Fig. 4 shows a modification of the groove, or miter, C, Fig. 2.

The blanks for these frames are preferably formed from some light, tasteless, and comparatively tough wood, which will bend at the corners without steaming or boiling, such as basswood or whitewood, the material being produced by cutting it from the log in the form of a thick veneer, or by sawing it into thin stuff and then planing both surfaces. The blanks A are then cut from this material, of the proper width and length, the ends dentated, as shown at A A, by means of a series of circular saws placed together upon an arbor or other suitable tool, so that they will interlock when brought together. The recesses B B are then formed in its edges at such points in its length as will bring them at the top and bottom of the frames when set up in the hive. These recesses form openings, which allow space for the passage of the bees between the frames, and for the ventilation of this part of the hive. Three triangular grooves, C C C, are then cut across the blank at such points in its length as will divide it into four nearly equal parts, each of which forms one side of the frame after the blank is bent into a quadrangular shape. These triangular grooves are cut nearly through the blank, sufficient wood only being left to hold the parts firmly together.

As the sides of the groove C are inclined toward each other at a right angle, it follows that, when the blank is bent into the form of a frame, these grooves make perfectly fitting miter-joints at three of its corners, the fourth corner being that at which the ends of the blank are united to each other by means of the interlocking teeth formed thereon.

In one of the spaces between two of the grooves C, and preferably that which will form the top of the frame when placed in the hive, is formed a longitudinal groove, D, for the guide-strip, which makes a secure point of attachment for the comb when the bees begin to build in the frames set side by side in the hive with the parts of the frame containing the recesses B B at top.

These frames meet a want long felt by bee-keepers, as those in common use are either dovetailed or nailed together at the corners; and, if set up at the manufactory, form a large bulk for transportation, and are very liable to breakage in handling; but if sold to the user in pieces to be put together by him, the numerous joints to be made cause loss of time, and produce a very fragile article when finished, which loses its rectangular shape with the slightest rough usage, as the joints at the corners lack the necessary strength and rigidity to hold them in shape.

My frame will be found to possess none of the above-named defects, as it is intended for transportation in solid packages before being set up; and when set up, possesses great strength and rigidity, preserving its form without difficulty during all the rough handling to which such frames are frequently subjected.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

As a new article of manufacture, a blank for honey-frames formed of a single piece of wood having transverse angular grooves C, longitudinal groove D, and recesses B, all arranged in the manner shown and described.

In testimony that I claim the foregoing, I have hereunto set my hand and seal this 6th day of May, 1879.

JAMES FORNCROOK. [L.S.]

Witnesses: { J. H. BOLLES,
M. WILLIS P. KEYES.

In regard to the matter of getting a patent for a particular purpose on something that has been already patented for another purpose, I submit the following from our old friend L. L. Langstroth, who has been for many years fully conversant with patents and patent law :

1. In the above patent, the longitudinal groove D is made a part of the combination, claimed as a new article of manufacture. The claim being what is called a combination patent, the patent is not infringed where the combination is not used. As Mr. Root makes no use of the groove, he does not infringe upon Forncrook's patent.

2. All the parts in Forncrook's patent have been known and widely used, more than two years before he applied for a patent on their combination. Grooves for guide-strips have been used by Root and others more than ten years. The making of a box out of a single strip, as Forncrook makes his honey-frame, is also an old invention, the same having been in public use years ago.

Can Mr. Forncrook, combining the groove, used long before he used it, with a box made long ago for another purpose, claim that he has invented any thing which our laws recognize as the proper subject of a patent? I will quote only a few decisions by Judges of the U. S. Supreme Court, which clearly show that he has not:

3. The application of an *old* thing to a *new* use, without any other invention, is not a patentable contrivance.—*Ames v. Howard*, 1 Sumn., 487, Story, J.; Mass., 1833.

This is a decision of Chief-Justice Story, one of the highest authorities.

The application of an old thing to a new purpose is not patentable. A purpose is not patentable; but the machinery only, if new, by which it is to be accomplished. In other words, the thing itself which is patented must be new, and not the mere application of it to a new purpose or object.—*Bean v. Smallwood*, 2 Story, 411, Story, J.; Mass., 1843.

It is not a new invention, if all the parts of a combination had been applied to a different object before, and they were now applied to a new object.—*Henry v. Henry*, Law Jour., 155, Woodbury, J.; Mass., 1845.

L. L. LANGSTROTH.

Oxford, O., Sept., 1883.

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

MR. A. I. ROOT:—Several weeks ago I wrote you an order for your A B C book, inclosing $1.25 to pay for the same, which I am prepared to prove, if necessary, by the man who works my farm, and by the P. M. where the letter was mailed. The book came; and soon after it came, your card, saying that I owe you $1.25 for the book. Now, before paying for the book the second time, I wish to ask you a few questions, and shall expect you to give me an unequivocal answer to each one.

1. Did you send the book in obedience to my order? and if not, by what authority did you send it?

2. If you sent the book in obedience to my order, how did you get the order without getting the money, as both were inclosed in the same envelope? On page 3 of your price list I find the following: "Cash *must accompany every order*, unless we have some personal acquaintance with you." Now, 3, do you pretend to say that in *this case* you so far departed from your published rule as to send the goods to an entire stranger without the cash, or even without being ordered? I should have said, in the fore part of this letter, that the book did not come as promptly as I expected, and I wrote you a card telling you that I had sent you the money with the order, and the book came a few days after.

And now, my dear sir, I do not wish to accuse you wrongfully; but truth compels me to say that I am fully satisfied, in my own mind, that the order and money were both received at your place of business; but what happened to it afterward, I am not prepared to say; but every circumstance goes to prove conclusively that the money was received, and was probably overlooked by careless clerks. I await your reply with some little interest.

Yours truly, W. S. G. MASON.

Morenci, Mich., Sept. 24, 1883.

Friend M., there is just one word in your letter that seems unnecessarily unkind. It is the word *unequivocal* — as though you had reason to suspect that, in my reply to you, I would probably try to equivocate, and try to excuse myself for keeping your money, and the goods you had paid for also. Perhaps I had better answer your questions without "equivocating," as you desire. We did not send you the book in obedience to any direct order; but we did send it because of the card you allude to, and this card was the first, and, in fact, the *only* thing we ever received from you when we sent the book. We publish the card below, and by so doing answer your No. 2:

Some three weeks ago, or perhaps a little less, I sent you $1.25 for your A B C book. Now, I do not wish to hurry you at all, but I begin to fear that my letter may have failed to reach you, as I have heard nothing from you. W. S. G. MASON.

Morenci, Mich., Aug. 31, 1883.

You see, the want of an A B C book is often of much more moment than the value of it. On this account we often deviate from our regular rule, and send goods without a direct order. I do not know that it is really deviating, after all; but it is this way: In our price list we tell our customers that we do not send goods without cash in advance; but where we find a brother in great need of something, and where we have reason to think the delay might cause him inconvenience, we take the liberty of sending it right along, to save him time, as we did in your case. Also, we feel a little anxious to do *more* than we agree, for any one who has lost money through the mails, although we distinctly declare we can not be responsible for money sent in an unregistered letter. You see, we may depart from the *letter* of our established rule, but not from the *spirit* of it.

Now, friend M., there is another very important point which, it seems to me, you and others thoughtlessly overlook or ignore, as it were. Even if I were a selfish and dishonest man, which I am sure I am not, I should hardly be likely to take your money and keep your book. Please note this: The A B C book has been the greatest work of my life; in fact, it is the best I ever did on any thing, for it has been the work of years, and I expect to devote more years to it. But it is no sort of use to me, unless it is put into the hands of the people. The book is no kind of value to me to lay on the shelf. The sole end and object of its existence (if you will allow me so to speak) is to have it in the hands of the people, or the hearts of the people, if you will excuse me. I ought to know pretty well what the book is by this time, for the thousands of kind words that keep coming thick and fast assure me that I have not labored in vain. Do you not see that, in view of this, I take pleasure in handing over the book to every one who orders it? I feel this pleasure because I have learned to know beforehand how pleased my customer will be when he reads it. I am speaking strongly here, and, some of you may think, boastingly; but I have earned the right, so to speak. Now, keeping this in mind, can you not see how it hurts me when any one intimates that I have kept the book when I have received the money?

You speak of my clerks. Now, I am sure my clerks share with me in this enthusiasm in regard to our work and our A B C book. We may be careless, it is true, for sometimes people by carelessness wrong their very best friends; but surely, friend M., we do not equivocate on such a matter — not one of us. Where we receive the money for an A B C, and it is lost on the way, we replace it without charge; and where any trouble comes up in getting the book into the hands of one who has paid for it, we would much rather give it away than to have any ill feeling; therefore I will freely cancel the charge which we have against you, if you feel anywise hurt or unpleasant about it. I have just interviewed the clerk who wrote in answer to that card which we have given above, and I find she wrote you as follows; or, at least, it is the copy of what we supposed was written when the bill was sent you:

Friend M., after a careful search we do not find your order for A B C. Will mail you one to-day, however, which, in order to keep matters straight, we will charge to account; and if order comes to

hand, we will notify you. Hoping above will prove satisfactory, I am yours, etc. A. I. Root.
Per Kitty.

The full amount was charged to you to show that we had never received any thing for the book, and also that it might be made straight if your letter should come to hand after a while, as stray letters often do. Sometimes they come in three or often six months after they were written, with the amount inclosed all right.

I wonder if the friends know how myself and my clerks study humanity — how we study people and their ways of doing. Just a few weeks ago our good friend —— sent us $115 in a letter, unregistered. Weeks passed, and no tidings came of it, and I confess I was almost tempted to think it could hardly be true, that any one was so thoughtless as to send such an amount in such a careless way. Finally I was one day surprised by an exclamation by the clerk who opens the letters. We all stopped work to see what was so wonderful. Mr. ——'s letter was at hand, and there the money was, all safely inclosed in the letter, exactly as he had said. Where had it been all this time? We were never able to discover. We were so glad to be able to find it all right that we did not investigate very much. Just one more point:

Every little while somebody accuses us of keeping back Gleanings after we have received the money for it — as if we could possibly have any object in so doing! Why, friends, surplus Gleanings that are left over almost every month are of no possible use to any one, and are then taken down to the warehouse and sold for waste paper, when they are out of date. Does some thoughtless one ask why we do not give them away, and also, while we are about it, give away the A B C too? Why, friends, for the simple reason it will not be using all alike, and you know we must have a uniform price for all. I believe no one ever accuses us of having this uniform price too high.

Perhaps, friend M., you only meant to intimate that we wanted the pay twice for one book. But even that is a pretty hard charge to make. Or did you simply mean that we had lost the money by our carelessness, and then asked you to send it again? Could you visit our office, and witness the precautions we take to prevent the possibility of such a thing, I hardly think you would make such a charge. Our postmaster puts all our letters into a leathern sack belonging to us. He then locks it up, and our book-keeper (who, by the way, is a lady) unlocks the bag and opens the letters herself. She also carefully notes the money, and makes it her business to see that it is credited on her books, where credit is to be made. Then the letters are distributed to the clerks over the different departments; and when they are through with them they are filed in such a way that we can, in a few minutes, lay our hands on any letters that have ever reached our office.

Now, then, to conclude with, please bear in mind that when our publications give you pleasure and profit, we receive pleasure and profit; and, therefore, it would not only be absurd, but almost idiotic to publish books and papers, and then keep them, after the money had been paid over. Come to think of it, there is a point here where I am selfish. I have a selfish motive in wanting our publications in your hands just as soon as possible after they are out of the press; for every student and pupil of A B C and Gleanings eventually becomes a good, permanent customer. Just see how that takes the romance out of it all.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

THE DROUGHT IN TEXAS.

We have just been through the longest drought in this part of Texas for at least 25 years. Think of it, not to have rain to any amount from March 23d till Sept. 8th! Our bees are, therefore, in a poor condition, and we are in Blasted Hopes. After one of the coldest winters known in Texas, they built up fast, and every thing looked promising till swarming time, when it was very windy and dry. As they held back from swarming, I divided some, but lost all the queens in mating. After trying one hive six times, to have a queen fertilized (the last proved a drone-layer), I had to double up at the end of June; in all I inserted about 50 queen-cells, and got 6 fertilized. Should we have some more rain, our bees may gather enough to winter from cotton, which is starting to bloom again, if the worms do not destroy it. Every thing else is dried up, and the fall crop is blasted too.

My report for this year will now sum up as follows: In spring, 24; increased by natural swarming and dividing to 42; doubled up to 22. Last year Texas stood against the world for honey; this year the world stands against Texas, though we will try another year. In our locality, where we have nothing to depend on for the honey crop as annuals, you can think how bees can gather honey when it does not rain for 5½ months, with the thermometer every day from 100 to 108° in July and August. If you like more reports for B. H., I can furnish you some of box-hive men in the neighborhood.

J. Schuddemagen.

Black Jack Springs, Fayette Co., Texas.

HONEY CROP A FAILURE.

Our bees quit storing honey in June, and since then have not gathered enough to live on. If it doesn't rain this month we shall have to feed for winter. we are feeding nuclei now; shall double up soon. From 100 hives we extracted only 2000 lbs. this year; 43 lbs. was the best, and 20, you see, an average. Last year 300 lbs. was the best, and 5000 lbs. the total crop. We sold, last year, at an average of 15 cts. per lb. None sold this year for less than 15 cts.

Waco, Texas, Sept., 1883. Guyton Bros.

Be of good cheer, friends. It is now pretty clearly demonstrated that almost every locality gives a bountiful yield of honey now and then if the apiarist is up and dressed, and ready to care for it. When friend Muth reported last year "not a pound of honey," I looked around on the hills about Cincinnati, and, without saying so, I settled down to the conviction that there was not much use in trying to keep bees in a city like Cincinnati. Now, however, he reports more than an average crop, and over 100 lbs. to the colony; and so it seems to be the world over.

"Remindery,"

Or Department for duties to be attended to this month.

WELL, bees not fed for winter are now to be attended to at once; and the question is asked, season after season, "How can we do it with the least trouble, and without danger from robbing?" I notice that Doolittle, in the *A. B. J.*, recommends taking combs out of the hive that are to be fed, and laying them in a deep dish or tub, and pouring honey into the cells with a coffee-pot or any thing that will make a fine stream. The syrup is to be poured a foot or more, or else it will not displace the air in the combs. When the comb is pretty well filled on one side, it is turned over and filled on the other; then hung in a comb-bucket or other receptacle until the combs have ceased dripping. Now they can be put where needed, and a comb filled with thick syrup is almost as good as a comb full of sealed stores. The syrup may be made quite thick for this purpose. Fill every comb in the hive as full as it can be, and they will probably have enough for winter. Friend D. remarks that this dispenses with feeders; and after you are done, you are done, and have no loose traps to gather up.

Where one has 100 or more colonies to feed, it is quite a nuisance as well as an expense to be obliged to have a feeder for each hive, and, after you are through with them, to store them away for another season. Now, all this is true, and I like the plan very much in some respects; but in other respects I do not.

For instance. We have now a comparatively new hand in charge of our bees, for the boys have gone to college; and should I direct him to feed our bees for winter in this way, I hardly think I could instruct him in such a manner that we should not have a perfect uproar of robbing before he was half through. The principal obstacle with us would be to get the bees all off the combs before the combs can be filled with syrup. It is true, we might take other combs; but even then we shall have to get as many out of the hives as we put in; and to do this would incite robbing, and prove quite a task. Our bees are mostly on the combs where we wish them, and the combs are arranged as we wish them; and for me it is least trouble to feed them syrup in a feeder until the combs are filled and bridged, just as they will remain till spring.

In regard to feeders, the bread-pan feeder is perhaps the cheapest and the simplest, were it not that bees are apt to get drowned in them, unless especial care is taken; and they also work slowly in cool weather. The pepper-box feeder is more trouble, but the bees will empty them, even during cool weather, for they can be inverted right over the cluster, and the space around them fixed warm with a mat and cushion. The Good candy, made into little biscuits, and laid right over the cluster, works nicely, and the bees take it all up very quickly. The only objection is the trouble of kneading the pulverized sugar and honey up so as to make the biscuits, and also the extra expense of powdered sugar over the granulated.

I rather think we shall do what feeding we are obliged to do, with a pepper-box feeder this way, and we are going to give the Good candy a pretty fair trial. Perhaps I might add, that the plan of filling combs was given a great many years ago by Mr. Quinby, but I can not learn that it has ever been used very generally.

Notes and Queries.

I THINK *you* will rejoice with me. I can report 16,000 lbs. of honey, nearly all extracted, and beautiful quality. Was in hopes to get some fall honey, but a severe drought prevents.

Hartford, N. Y., Sept. 9, 1883. J. H. MARTIN.

I took 10,000 lbs. of comb honey and 4000 extracted this season. J. B. KAPP.

Owensville, O., Sept. 1, 1883.

Send me a crate of Clark smokers, and I will whip those hybrids, or die in smoke. W. S. BROOKS.

Conshohocken, Pa., Aug. 6, 1883.

I had 30 colonies in fall of 1882; 29 in spring of 1883; 46 in fall of 1883; 508 lbs. comb honey, 700 of extracted, and 45 lbs. of beeswax. J. R. CROOKS.

Keiths, Noble Co., Ohio, Sept. 15, 1883.

Bees have done fairly well in this locality this season. Heavy frosts last night and night before. Comb honey in small sections, $14 00 per hundred; ext., $10.00 do. J. Y. KEZARTEE.

Ceresco, Michigan.

EFFECT OF COOL WEATHER ON HONEY-STORING.

We have had two weeks of very cold weather here, and all work in boxes has stopped dead still. The weather is more favorable for a day or two back, but cold yet. GEO. E. DUFFIN.

Galesville, Wis., Aug. 11, 1883.

Our bees have done well since the 10th of Aug. I shall average over 100 lbs. to the colony, spring count. We can beat the most of them, on the "home stretch," any way. If weather keeps good, I shall get honey till 10th of Oct. E. W. PITZER.

Hillsdale, Mills Co., Ia., Sept. 15, 1883.

FROM 8 TO 27, AND 717 LBS. OF HONEY.

My report for this year is as follows: Spring count, 8 swarms; 2 were queenless; they had to raise their own queens. Built these 8 swarms up to 27; extracted 693 lbs. of honey, and had 24 lbs. of comb honey. I have on hand 35 frames of good sealed clover honey to keep for next spring's feeding.

WM. LEITZ.

Hurtisford, Dodge Co., Wis., Sept. 10, 1883.

FROM 3 TO 11, AND 500 LBS. HONEY.

My report for this summer is as follows: Started with 3 swarms; increased to 11 strong swarms, with ample stores, and 500 lbs. of as nice comb honey as I ever saw—basswood and white-clover; no fall honey at all. How is that for Minnesota, and an A B C scholar? GEO. E. JONES.

Northfield, Rice Co., Minn., Sept. 25, 1883.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, OCT. 1, 1883.

The Lord is with you, while ye be with him; and if ye seek him, he will be found of you; but if ye forsake him, he will forsake you.—II. CHRON. 15: 2.

SUBSCRIPTIONS seem to be coming lively this fall, and we have now 6160 names.

JONES'S NEW HONEY-PAILS.

THESE are exactly like his old ones, only that the cap screws on, just about as the cap goes on a Mason fruit-jar. We can furnish them any size for one-fifth added to the price of the old ones.

FIFTY imported queens have been received since our last. All orders are filled, and another fifty is expected daily. Remember, they are just half now what they will be in the spring; and if you can winter your bees it will be quite a saving to buy now.

A CORRECTION.

ON p. 565, last JUVENILE, last column, in the 7th and 10th lines from bottom, read *broad* for *brood*. If the friends will always say *wide* instead of *broad*, this chronic trouble will disappear. Sometimes we can tell neither from the meaning nor writing which word to use—*brood* frames or *broad* frames.

MESSRS. COLGROVE & ULERY, who for a short time had charge of the *Bee-Keepers' Exchange*, at present stand in a pretty bad light. The editor of the *Bee-Keepers' Magazine* tells us that nothing can be found of their whereabouts. If the eyes of these men meet this notice we beg to notifiy them that, if they do not wish to be considered humbugs and swindles, it would be well for them to speak out. If they have any friends who might say a few words in their defense, we should be glad to hear from them.

IN answer to the many inquiries for books on shorthand writing, we have now in stock, ready to mail, Longley's Eclectic Manual of Phonography, a beautifully bound book of 140 pages, which we can send for 75 cents; also the Phonographic Reader and Writer, a pamphlet of 48 pages, which we can mail for 25 cents. The 75-cent book should enable any smart boy or girl to learn to read and write shorthand. The 25-cent book has one page in common print, and the opposite one in shorthand. The paper and typography are beautiful.

JONES'S NEW LABELS FOR SECTIONS.

NO wonder that friend Jones thought we would be surprised when we got a sight of these. They are truly beautiful. We are at present unable to send out samples, but shall be as soon as a large lot arrives which Mr. Jones is to send us. They cover the outside of the section, and lap over so as to hide from view the spaces left, oftentimes, next to the wood. The purchaser has only a view of a clean, square comb of honey. For retailing, friend Jones has a very pretty pasteboard box, just right to hold a single section of honey. These boxes are covered with beautiful and appropriate labels, and will not exceed two cents in cost, if I am correct, label and all. The box is so handsome that the honey will sell for enough more to pay the cost of it, and the honey can be shipped with perfect safety, so as to stay in these boxes. We shall soon be able to furnish samples.

SELLING BEER ON THE FAIR-GROUNDS, ETC.

IT seems that the Tri-State Fair, as well as our State Fair at Columbus, Ohio, has thought it necessary to sell beer on the fair-grounds. Not only men and boys were drinking, but girls and women too. The crowd was so great that arrangements for feeding the multitude were wholly inadequate, and some of our bee-friends preferred to go to town for their meals, rather than endure the jam and uncleanliness on the grounds. I asked neighbor H. if he supposed we could find a resturaunt where they did not sell beer and cigars. We passed by a good many, and began to fear the search was in vain; but at last we alighted on a dining-room that seemed too clean and wholesome looking to be a reality on that crowded street. It was sandwiched in between two large liquor-shops and billiard-halls; but within we found intelligent and refined looking women; every thing was as faultlessly clean and pure as —— things at home. Prices were very moderate; and as we paid our fare I could not help expressing the pleasure I felt at finding a place free from tobacco, beer, and gambling. In reply, a delicate little card was handed me with the following inscription on it:

WOMAN'S CHRISTIAN TEMPERANCE UNION
DINING - HALL,
53 SUMMIT STREET, TOLEDO, O.

Then for the first time I noticed a large water-tank at the door where passers-by drank freely without money and without price, and saw in large letters over the door, W. C. T. U.

OBITUARY.

DIED, one mile east of Newpoint, Ind., Sept. 21, 1883, of hasty consumption, Mrs. Debba J. Cook, wife of Theodore J. Cook, aged 23 years and 16 days.

Mrs. Cook's maiden name was Debba J. Hopper; she was born in Ripley Co., Ind.; moved to Decatur Co., in the spring of 1868; joined the church at the age of 14 years, and was joined in the holy bonds of matrimony, Sept. 5, 1880, by the Rev. A. M. Louden, to Theodore J. Cook, with whom she lived a true, kind, and affectionate companion and wife. She lived a true and devout follower of Jesus, until he came and relieved her sufferings.

She is gone; but only a few more days or years separate us. The Lord gave, and the Lord taketh away. Blessed be the name of the Lord.

T. J. COOK.

Newpoint, Decatur Co., Ind., Sept. 24, 1883.

Cards for Bee-Keepers.

Your name and address printed on a fine quality of bristol, with cut of queen in colors on one corner; 50, 75c; 100, $1.00. Send for specimen book of Honey Labels.

GEO. M. GRAY, Medina, Ohio.

500 LBS. BEES for sale at 80c. per lb. Queens same price. F. L. Wright, Plainfield, Mich.

DADANT'S FOUNDATION.

—UNSOLICITED TESTIMONIALS.—

Nothing is better; your fdn. suits exactly.
Cincinnati, O., Oct. 23, 1882. CHAS. F. MUTH.
The finest and brightest I ever saw.
Adamsville, O., March, 1882. GREEN R. SHIRER.
Best I have used; no breaking down; bees take it readily. W. B. SPENCE, Sidney, Ohio, Aug. 31, 1882.
I like it better than any offered by dealers.
Baltimore, Md., Jan. 24, 1882. C. H. LAKE.
It is the nicest I have used. D. KEYES.
Louisville, Ky., June 20, 1882.
It is the best I ever saw. GEO. WUSTUM.
Racine, Wis., July 19, 1882.
Willing to pay 2 cts. per lb. more than for any I have seen. F. WILCOX, Mauston, Wis., Mar. 23, 1882.
The most perfect article that I have seen.
Christianburg, Ky. G. W. DEMAREE.
Very well satisfied. Bees worked on it finely.
Avon, St. Genevieve Co., Mo. WM. BLOOM.
Have used about 75 lbs. from ———, but I prefer yours. REV. W. BALLANTINE, Sago, Ohio.
Your foundation is the best. J. W. PORTER.
Charlottesville, Va., March 25, 1882.
The nicest I ever received. H. W. FUNK.
Bloomington, Ill.
Your fdn. beats them all. Bees draw it out faster. JOS. CROWDEN, Remington, Ind.
Ahead of any fdn. maker of the world.
Borodino. N. Y. G. M. DOOLITTLE.
I concluded to send to you, even if express is higher. Council Grove, Kan. D. T. NORTON.
I never saw any nicer. G. TISDALE.
Westfield, N. Y., March 31, 1882.
Better than any I have ever had. J. B. MASON.
Mechanic's Falls, Me.
Well pleased with the foundation.
Council Bend, Ark. GEO. B. PETERS.

We now pay 28c CASH for Beeswax of GOOD QUALITY.

CHAS. DADANT & SON,
HAMILTON, HANCOCK CO., ILL.

GEORGE W. BAKER,

—OF—

Lewisville, Henry Co., Ind.

Has 3000 New Illustrated Circulars (to give away) of
ITALIAN BEES, QUEENS,
Plymouth Rock & Brown Leghorn Fowls.
EGGS FOR HATCHING.
Also Extractors, Honey-Knives, Smokers, etc., etc. 3-2d

HEADQUARTERS FOR

Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular, containing directions for introducing queens, remarks on the new races of Bees, &c. Address
1tfd DR. J. P. H. BROWN, Augusta, Ga.

LOOK!

A Perfect MORSE Telegraph Instrument for beginners. Send for catalogue.
5-12d P. B. KINGSLEY, Greeneville, Greene Co., Tenn.

CANADA ONLY.

Summer Rape Seed For Sale by
H. SMITH, Box 102, New Hamburg, Ontario, Canada. 8tfd

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82 COLONIES 82

ITALIAN BEES FOR SALE.
10d JULIUS FROSCH, Elmore, Ottawa Co., O.

MUTH'S

HONEY EXTRACTOR,

SQUARE GLASS HONEY JARS,
TIN BUCKETS, BEE HIVES,
HONEY SECTIONS, &c., &c.

Apply to CHAS. F. MUTH, CINCINNATI, O.
P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers." 1tfd

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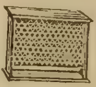

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Sole Manufacturers,
4tfd Sprout Brook, Mont. Co., N. Y.

THE VERY BEST

Italian and Holy-Land Queens; also Apiarian Supplies at prices to suit the times. Circular free.
GEO. H. KNICKERBOCKER, PINE PLAINS, N.Y.
5-8d

FINE IMPORTED QUEENS

JUST FROM BOLOGNA, ITALY, ONLY $5.00.

Select tested queens, young and prolific, - -	$3 00
Tested queens, young and prolific, - - - - -	2 50

No more "dollar" on hand this year.
J. S. TADLOCK, Luling, Caldwell Co., Texas.

CANADA ONLY.

DOLLAR QUEENS BY RETURN MAIL.
H. SMITH, BOX 102, NEW HAMBURG, ONT., CAN.

CHOICE QUEENS

I am now up with my orders, and cull my queens down to the very best. Can send by return mail.
J. T. WILSON, Mortonsville, Woodford Co., Ky.

BEE-KEEPERS' SUPPLIES.

It will pay to get our prices before purchasing supplies; good Langstroth hives, with 8-inch cap frames, in the flat, 60 cts. each; Langstroth winter-protector, in lots of 50, $1.50 each; small lots, $1.75, all in the flat. Manufactured of good pine lumber. Workmanship unexcelled. Crates, sections, and foundation. **WM. O. BURK,** 8tfd
Successor to Hiram Roop. Crystal, Mont. Co., Mich.

ATTENTION!

FULL COLONIES OF BEES, NUCLEI, QUEENS, FOUNDATION, SECTIONS, SMOKERS, HIVES, AND ALL APIARIAN IMPLEMENTS CONSTANTLY ON HAND. FULL COLONIES AND NUCLEI A **SPECIALTY.** SEND FOR CIRCULAR AND PRICE LIST TO

FLANAGAN & ILLINSKI,
BOX 819. BELLEVILLE, ST. CLAIR CO., ILL.
6-12d

EXCHANGE.—Plymouth Rocks and Brown Leghorns for Italian or Cyprian bees. Address
T. G. ASHMEAD, Williamson, Wayne Co., N. Y.

Isn't it Pretty!

That is Nice! Neat! Handy!

Is what people say of a wooden article that I will send you by mail postpaid for 70 cts. Have been selling them at $1.00 each. I wish to show you how you can make some money at home.
9½c WM. FULLER, Woodville, Wis.

Contents of this Number.

Awarding Premiums 531
Apiary, To Move............ 546
Basswoods from Cuttings..540
Bees and Peaches............545
Bees and Chickens..........547
Bertie and 50 Swarms.......545
Black and Hybrid Queens..555
Blue Ridge....................539
Boardman's Letter..........536
Boy on Tobacco..............543
Cart for Moving Hives......529
Combs Falling Down........548
Editorial 555
England.........................540
Entrances, Large Winter...539
Emery Wheels................544
Ethel Pounding Hives......544
Harrison, Mrs................542
Honey Column.............. 52[illegible]
Honey Tipped over. 548
Kind Words...................525
Lulu's Swarm.................547
Missouri and Kansas........540
Myself and Neighbors......541
New Tinware for Honey....532
New Fountain Pump........530
Nebel's Report..... ... .546
Nora's Bees....................546
Norton on Breeding..... ...537
Orange-trees...................547
Our Harry......................542
Quails............ 548
Queen with 2 Yellow Bands.548
Queens Hatched in Cages...544
Queens, Hatching in Bed...547
Reports Encouraging.......552
Report from Blacks 553
Smith's Report 553
Sorghum and Bees..........544
Springs, The Twin...........552
Sunday 538
Swarming-box.................546
Swarm that went off........545
Swarms, Little................548
Texas.............................546
Tobacco Column 552
Toronto Convention........533
Vine Maple.....................544
Virgil ... .527
Wedding........................543

KIND WORDS FROM OUR CUSTOMERS.

There has been a great rush for chaff hives, 1-pound sections, and your style of fdn. Thank you for systematizing this great industry.
Sterling, Ill. A. F. STAUFFER.

Thanks for your indulgence, and also to the boys and girls for the nice packing, etc. May the Lord continue to bless you all. D. M. TWEEDY.
Smithfield, O., Aug. 7, 1883.

The bill of goods ordered of you two weeks ago came to hand last Friday, in the best possible shape; and although I expected something nice, I was really surprised to find every thing so much better than I expected. GEO. W. VANDERGRIFT, age 52.

I have used now for about 10 days your No. 10 honey-extractor, and will say that I am well pleased with it. I have extracted nearly 3000 lbs. prime quality white-clover honey. My vicinity is first class for bee culture. We have plenty of basswood.
Preston, Ia., Aug. 4, 1883. CHRISTIAN HENTON.

I see that you are building some addition to your factory, in order to have more room. It may be that subscriptions in advance will be acceptable. To that effect I inclose $1.00 for GLEANINGS for 1884. If you should make any change, so that the subscription would be more, then I will make it all satisfactory. D. F. LASHIER.
Hooper, N. Y.

We have received the honey-pails and labels all O. K. They just look tiptop. Hurrah for the JUVENILE GLEANINGS with her mother's bonnet on! Tell Judge Harriman we want him to be sure to represent Arkansas at the B. K. Convention in Toronto. Also send me his address. A. R. NISBET.
Dobyville, Ark.

[Who can answer friend Nisbet?]

Well, friend Root, I am sorry to hear that you are experiencing some trouble with intemperate brothers in your town. I will just tell you how it is with us. When the temperance people of our town do their whole duty, then we are on the mountain-top; and when we fail to do that duty, then the whisky men get upon the mountain-top, and we are down. Just now I think we are pretty well down, and the fault is all our own. United we stand, divided we fall. D. F. LASHIER.
Hooper, N. Y.

JUVENILE is just at hand. Up goes our hat — hold on! it is just brand new, so it can't go up; but our prayers have, and will. Glory to God! the temperance ball is rolling at last, and in the right direction too. When a nest of vipers is stirred up, you both see and smell 'em; hence, that "man and brother" across the way. Turn on the electric light (spiritual), *strong*, and "keep your powder dry." Sooner or later we or our children will have to fight the issue out in blood. Let it come. D. H. TWEEDY.
Smithfield, O., Aug. 24, 1883.

I suppose you omitted "Our Homes" in last GLEANINGS, to find out how it is appreciated. That is too practical for me. Great was my disappointment when, on Sunday evening last, I took up GLEANINGS, looking for "Our Homes," for a sort of recreative reading after my duties of that day, not to find a shadow of it. Now, curtail GLEANINGS if you will, or anywhere you have a mind to; but give us "Our Homes;" it is the best part of it.
ALFRED MOTLAZ.
Ottawa, Ill., Sept. 9, 1883.

[Friend M., you have not read "your book" carefully, or you would have seen that Our Homes is now put in JUVENILE. I am glad to know that you noticed it; and I can assure you that Our Homes will be kept up so long as I have strength to edit GLEANINGS; and when I am obliged to lay it down, Ernest will probably take it in hand. In fact, he is now being educated for that very purpose.]

I have read your journal for years, though I have not been a bee-keeper. Especially have I been interested in your Home department. I watched with much interest, and I can say truthfully with some solicitude, the stand you took in the first introduction of this into your journal. It did seem to be revolutionary, if I may be allowed the expression. I had been a subscriber and correspondent for years for poultry papers; and could understand what amount of moral stamina it required to introduce an entirely new feature into a bee journal, and one so many people would consider so foreign to the interests of bee-keepers. Yet I am one who fully believes in carrying our religion into our business; and if we do, both must thrive, as we have the promise of the life that now is as well as the life to come. I am certain that God has blessed you in your efforts to honor him in connection with your work, and I have no doubt but that he will continue to bless you. I hope you will not think I am making too free on so short acquaintance, but I have felt for years like writing to you and bidding you God speed. STANLEY SPILLETT.
Lefroy, Ont., Can., Aug. 7, 1883.

SOMETHING MORE ABOUT "J. R."

I wrote you a few lines last spring, "How J. R. Transfers Bees," and requested you to send J. R. a smoker, because he needed one so badly, and did not seem to have the money to spare to buy one, and I mentioned the fact that he had quit the use of tobacco, and I received one so promptly that it made me think still more of the bee-man, A. I. Root. I just felt like writing a few lines more to let you know that I had not forgotten you yet. I stayed with J. R. until only a few days ago; while there I learned to like the bees, and I was sorry to leave; but it seemed that duty called me away.

I said I learned to like the bees; and why should I not? During all the time I was there I did not get the first sting, and they pushed out *early in the morning* too. Bee-boys, did you ever notice that? Now, was there not something wonderful about the bees not stinging me? It may be that I shall become a regular bee-man. I have thought sometimes (if it were the Lord's will) that I should like to go to Medina, and work for Bro. Root, since there is so much to do, and that is the part that I like. Where all hands are so busily at work, we don't have time for things that are wrong and mean. Yes, if I were there I could run that powerful engine. I am an engineer. Men write on paper, and sign their names to it, that I am a good engineer, and a good hand, and easy to get along with, and it just strikes me that *all* of Bro. Root's hands are agreeable, because the superintendent says, or repeats, "Not by might nor by power, but by my Spirit, saith the Lord." Now, if I am agreeable, I ought not to have any credit for it, for it is because I am yoked with Christ, and he leadeth me, and he keepeth me. Pray on, brethren; don't lay thy "armor down," nor think the "victory won;" thy work will ne'er be done till thou obtain the crown.

J. R. has sold over 2000 lbs. of honey. He started some three years ago with 3 stands, and has pulled through much discouragement from his neighbors. If he keeps on at that rate, even in a few years he will need that little blue-eyed boy of his whom he calls Sammy, to help him. This will be my first letter with 2 cts. C. V. LINDLEY.
Indianapolis, Ind., Sept. 29, 1883.

I wish you would send me some of your circulars, so that I could give them away. Everybody admires my colony of bees you sent me. They are the finest in this section; that is why I ordered the second one of you. JAMES H. BOSWORTH.

Taunton, Mass., Aug. 27, 1883.

I received extractor and other goods all right, and am well pleased with them. My neighbors think it a wonder, as well as myself. Those nickel-plated shears are good sale; every one that sees them thinks they are such nice ones. ANN SCAIFE.

Barboursville, Lycoming Co., Pa.

OUR TEN-CENT SUSPENDERS.

Inclosed find 15 cents. In return, please send me soon one pair of those cheap suspenders you sold 2 or 3 years ago, no elastic in front part, but good stiff elastic in the back. They are the easiest I have ever worn; can't get them in this city.

E. S. COTNAT.

Des Moines, Iowa, Oct. 3, 1883.

The imported queen that you sent Aug. 20, 1883, is doing well. The day I received them, I gave them plenty of honey and brood. She commenced to lay the next day, and I must say she makes things "get." as a layer. I found plenty of young bees from her three days ago. They are beautiful bees. Please receive many thanks for same.

S. F. BOSLER.

Rockport, Ind., Sept. 17, 1883.

THE GOOD CANDY.

On the 18th of September, I mailed a customer of mine 4 queens, which did not reach their destination until Oct. 3d. Queens were all lively, but a good many dead workers. They were sent in Peet cage with candy made of powdered sugar and honey; no water. What do you think of that?

Albion, O., Oct. 9, 1883. J. R. LANDES.

I have all the GLEANINGS bound from first number complete, for which I would not take $5.00 per volume. I am very busily engaged in my other business matters, and no time for bees at present; but I expect to keep them again some time, as I made them *pay* aside from the pleasure I take in working with them. I enjoy reading GLEANINGS also, aside from bees, especially the Home Papers; and although I have little time to devote to them, I do not want to be without them. I wish you much joy and abundant success in your good work. N. H. ALLEN.

Kirkwood, Mo., Oct. 9, 1883.

A LESSON ON THE NEED OF A WHEELBARROW IN THE APIARY.

My wheelbarrow has failed; and seeing the drawing and your description of the gas-pipe barrow, I hereby send an order for one forthwith, as I hurt myself yesterday in lugging in honey from the yard, so I can't accomplish much to-day. Our honey is very good up to date—all light colored. The third car-load of California honey in Syracuse has overstocked the market at 15c., 1-lb. sections, no glass. Our yield is fair—perhaps over an average.

S. H. CORBIN.

Fabius, Ononadaga Co., N. Y., Aug. 16, 1883.

ONE-PIECE SECTIONS MADE OF VENEER.

I have not got my honey all packed yet, so I can not tell how I am coming out; but I have enough to keep me out of Blasted Hopes. I think I have 50 lbs. to the swarm—just half a crop, as compared with my crop for the two years past. I still use veneer sections, and don't think I want any others; but then, like friend Hutchinson, I may change my mind. Now, friend Root, as regards one-piece sections, they have been made and used for the last six or seven years, to my certain knowledge; so you just fight Mr. Forncrook; and after the battle is over, let us know what the cost amounts to, and see if we don't help to pay it up. WM. L. KING.

Benton Harbor, Mich., Oct. 12, 1883.

Do you want a name for "Peter"? We have buried two of the sweetest baby boys you ever saw, in the last three years. Their names were Fred, and Wallace. I think those the nicest names, and only a good boy would be worthy to wear them. How do you like the names? George and Will are good names too. Bees are not paying their rent this year. We have 23 swarms now, from 8, spring count, and don't get honey enough for the table. Have sold 50 cts. worth. MRS. C. Y. STEWART.

Altona, Boulder Co., Col.

[As far as the name "Wallace" is concerned, my good friend, our proof-reader says he has the monopoly of that around here. He says, too, that he has a brother named Fred, and one named George, which seems rather a queer coincidence, from the fact that you mention all three, and are yet an entire stranger.]

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CHICAGO.—*Honey.*—During the past two weeks we have enjoyed the best trade of the season of 1883. The receipts have been large, but demand has kept pace with them, and prices have been very firm; choice lots of 1-lb. frames bringing 20c per lb; 1½ to 2 lb., 16@18c., mostly at 17@18c. Extracted, a little better demand, but not very active. Prices obtained, 8@10c. *Beeswax.*—Sales are few at 32c for yellow; and dark, 25c. R. A. BURNETT.

Chicago, Oct. 15, 1883.

CLEVELAND.—*Honey.*—Honey continues without change; 1-lb. sections of best white sells readily on arrival at 18@19c; mostly at 18c. When, by some accident, it arrives in bad order, it does not sell very readily. Our experience is, that freight lots, when in full glassed cases, arrive in far better order than by express, because there is more time to handle properly. The 2-lb. unglassed sell at 17@18c; all glassed sections about 2 cts. per lb. less. Extracted very dull; no inquiry.—*Beeswax*, 28c.

Cleveland, O., Oct. 13, 1883. A. C. KENDEL.

MILWAUKEE.—*Honey.*—The market here for honey remains very much the same as when reported, although there is a better supply on hand, the receipts having increased, and a fair trade enjoyed, and can quote choice clover, white, 1-lb. sections, 17@18c; larger sections, below choice, 15@16c; extracted, choice, 10@10½c; dark, 8@9c. *Beeswax* wanted, and salable at 25@30c, if pure.

Milwaukee, Oct. 13, 1883. A. V. BISHOP.

CINCINNATI.—*Honey.*—The demand for honey is extremely slow, and our commission houses are too well supplied to expect any thing else, and prices rule low. Manufacturers complain of slow business. Extracted honey brings 7@9c on arrival. I have bought for less. Comb honey in good order, 12@15c. *Beeswax*, good yellow brings 27@28c. Offerings few.

Cincinnati, Oct. 13, 1833. CHAS. F. MUTH.

I want to buy some comb honey in large frames, or in boxes, or in 1 or 2 lb. sections.

Georgetown, Ver. Co., Ill. J. R. LINDLEY.

I have 1200 lbs. of heart's-ease and basswood honey for sale in 10 and 17 gal. kegs, for which I will take 10 cts. per lb., delivered on the cars at Plattsmouth, Neb., charging 85 cts. each for the kegs. The honey is very nice and thick, and warranted good.

J. M. YOUNG.

Three Groves, Cass Co., Neb., Oct. 13, 1883.

Wanted, 1000 to 2000 lbs. clover comb honey, in one and two pound boxes. State prices and quality.

S. WHAN.

Raymillan, Venango Co., Pa.

Wanted—Extracted Honey.—All having any to sell will please state kind, price, and how much.

CHAS. D. DUVALL.

Spencerville, Mont. Co., Md.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES, HONEY & HOME INTERESTS.

Vol. XI. OCT. 15, 1883. No. 10.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00, 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

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VIRGIL'S TREATISE ON BEES.

DISEASES OF BEES. (1)

If with some sad disease their bodies waste
(Since of our ills life gives it them to taste),
The same by signs not doubtful one may know,
For soon the sick an altered color show. (2)
Disease deforms their looks with bristly hair; (3)
Then from their dwellings forth anon they bear
Those bodies whence the light of life has fled,
And lead the sad processions of the dead; (4)
Or feet to feet they close together cling,
And from their dwelling's threshold idly swing; (5)
Or in their inmost shrines they linger all,
Sluggish with hunger, and in torpid ball
Condensed and cold: (6) then deeper sound is heard
Than e'er is wont when healthy bees are stirred; (7)
They murmur lightly with a drawling wheeze,
As sometimes cool south wind among the trees;
Or as the sea its watery bosom laves,
And troubled hisses with reflowing waves;
Or as fierce fire, inclosed in furnace walls,
A trembling sigh with smothered fervor drawls. (8)

REMEDIES FOR DISEASE.

Here I advise sweet galbanum to burn,
And honey through a pipe of reed to turn, (9)
Rousing them well, moreover, lest in vain
Thy help be proffered to the sluggish train,
And loudly calling, in an urgent mood,
Their sleepy senses to the well-known food. (10)
To mix with feed it may be well to try
A little powdered galls, and roses dry; (11)
Or grape molasses use, well simmered down;
Or wine, from the vine's bunches dry and brown,
With thyme that loveth the Athenian dells,
And centaur-plant that very strongly smells.
And there's a flower that in the meadows grows,
Amellus, for a name, the serf bestows,
An herb by those that seek it easy told;
It springs a thicket from the turfy mold,
Golden itself, but in its leaves around,
With which in great abundance it is crowned,
The lurking hue of purple richly glows,
A purple dark as oft the violet shows;
And with its wreaths, in deft profusion flecked,
Often the altars of the God's are decked;
Acrid in flavor to the mouth it seems;
This shepherds gather by the bending streams
Of Mella, and adown its pastured vales;
Simmer in wine, which fragrance sweet exhales,
The roots of this, and place their doorways by
Full canisters of food for their supply. (12)

(1) Virgil is hardly at his best in this passage. Starvation, exhausted queen, constitutional debility, spring dwindling, dysentery, and we know not what else, seem to be jumbled all together, and an equally miscellaneous lot of remedies given for the batch; to wit, fumigation with galbanum, feeding pure honey, feeding honey mixed with powdered nutgalls and roses, feeding grape molasses, feeding fluid extract of thyme and centaurea in raisin wine, and feeding sweet wine in which amellus roots have been simmered. At the worst, however, these are harmless remedies; and if applied to a case which is curable by stimulation, some of them may be quite useful. His head is level on one thing: feeding pure honey will cure starvation. Moreover, it's plain that his idea of medical practice was to have the

medicine *good*. Three cheers for Dr. Virgil (!) (!) (!) We would be glad to know if Virgil had met any cases of foul brood; but he mentions no unmistakable signs of it. The smell of glue, the glue-like masses in the cells, and the little ragged holes in sunken caps, these are prominent signs; and as they are not mentioned, most likely foul brood was not known to the writer.

(2) The color of the juices of the body and of the contents of the stomach have some effect on external color. In fact, you remember that some of our strong Italianists wanted to make it out that the black bees friend Jones saw near Rome were only pure Italians that had been eating too much huckleberry pie. But the change of color in ailing bees is mainly owing to the contraction of their bodies, which slides the light-colored portion of each scale in out of sight.

(3) Probably a sick bee has no more hairs on him than a well one; but he certainly looks as though he had, and that is sufficient. He feels to lifeless to brush himself as usual, and so goes looking like —— hold on, we won't have her name in print —— when she comes to breakfast with pillow-bangs streaming all around her head.

(4) These bees have been superseding a worthless queen; and, having got so far as to raise one smart enough to kill off her rivals, they will come through all right. Nothing better for them now than good stimulative feed; so Virgil is a safe guide so far. How do we know this? Why, strange as it may seem, bees do often form a sort of funeral procession where a dead queen has been dragged out, and keep crawling back and forth along the line which their keen sense of smell tells them she has passed over; but they always treat dead drones and workers with perfect contempt.

(5) You rather stump me here, dear Virgil. Surely you haven't let them get so full of honey and brood that they have to hang out. I rather fear that the interior is so corrupt with dead brood that they hang out for fresh air; if so, I don't believe amellus root and wine will save them. But you may try it though.

(6) Starvation is what's the matter with these bees; but there may be some disease behind it that made them get so poor, and run out of food. When bees fear that they are going to run short, it makes them quite enterprising to snatch and rob, oftentimes; but when want actually comes they do not behave at all like starving animals would do — no tearing around like a hungry bear among them. By clinging all together in a dense mass, and entering the semi-torpid state, letting animal heat run down to the lowest point, they can live a considerable time on almost nothing, hoping and waiting for a change of weather, and a flow of honey, and this is the course they almost always take, I believe.

(7) The tone of a sound is high or low according as the undulations are rapid or slow. Bees torpid with cold or hunger wave their wings very gently — only fast enough to make the lowest possible buzz. From this upward through all the bee-moods and tenses there is a long scale of sounds, ending with the horrible "sing" of a frantic one that is digging in your hair, trying to get down where he can give you a taste of the "bitter end."

(8) The variety and richness of Virgil's resources is well shown by these comparisons to illustrate the sounds made by ailing bees; the last especially is very striking, and within the experience of all.

(9) Virgil shows familiarity with two kinds of feeding. The food mentioned at the end of the next caption, amellus root and wine, was not too exciting to be fed outside the hive, and so it is placed in proper vessels by the entrance. The vessels, I believe, were baskets made tight by the use of pitch or wax. A float to keep the bees from drowning is not mentioned; but perhaps the "canistra," made to carry liquids, usually had a floating cover to secure the contents from slopping over. Soakage through the wall of the basket itself might be made to supply the bees, if the thing was got up just right. The kind of feeding proposed at (9) is substantially the Jones method. Trusting that the hive will be waxed tight at the bottom, it is tilted back a little, and a small hole made, through which honey can be poured by means of a reed pipe. Whatever honey does not adhere to combs or bees, rests on the bottom-board till the bees carry it up and store it.

(10) This is a quite important point. Bees, if far gone, may starve very near to plenty, if the keeper does not make sure that they get started at the food.

(11) To counteract dysentery by the use of astringents is a thought that easily occurs to intelligent minds; but I believe modern experience indicates that it is not often worth while to medicate food; possibly we are too heedless in this, and the ancients wiser than we.

(12) See under note (9).

The translation and notes on pages 562 and 582 I will mostly defer till next time, when the same passage will come under consideration. It is with some feeling of regret that I tell you we have reached the end of the scientific part of the poem. The fourth Georgic is composed of two very different parts; the first, as we have seen, is rich, meaty, and wise; the second is very light reading indeed — a batch of enormous mythological yarns — which same the poet knew his countrymen loved so well — put in to keep the sensible part from sinking into oblivion. The account of the spontaneous production of swarms of bees forms the natural stepping-stone between these two parts.

And what shall we do with the rest of the poem? At first I thought to stop when bee-ology played out; then I planned for a sort of review of the latter part, with selections here and there; and now I don't know but that we could extract fun enough out of it to pay for going over the whole. By the time we get through with that well-pounded bullock, we will see what shall come next. E. E. Hasty.

Richards, O., Oct. 8, 1883.

Friend H., I, too, feel sorry to think that we are at the end of your interesting translation — especially so because so many valuable facts have been brought out by it. Our good friend Mr. Langstroth, in talking to me in regard to Virgil when we were at the convention — by the way, I want to digress long enough to say that friend L. and I roomed together, and we not only talked until after 12 at night, but he waked me before 6 in the morning to tell me of some more grand ideas he had just thought of. I would not for the world have you think that I objected to being wakened so early, for, my friends, if there is a pleasant bee-enthusiast on the face of the earth, in the way of colloquial powers, it is good friend L. Well, among other things we talked about you, friend Hasty, and we talked about Virgil, and Mr. L. made this charge against you — if it can be called a charge. He said you had, in your translation, greatly helped Virgil, or that you had made him out greater and wiser than he justly deserved. At any rate, I think we all owe you a debt for having shown us how much real intelligence there was in Virgil's time, and for having let us see that all wisdom and knowledge does not belong entirely to us of the 19th century. Now, friend H., I do not take much stock in mythology; that is, I do not like very much of it at once. But I think we can safely trust you to bring out all the good there is in it. We like fun, don't we, boys? But we want something substantial pretty close by.

A CART FOR MOVING HIVES.

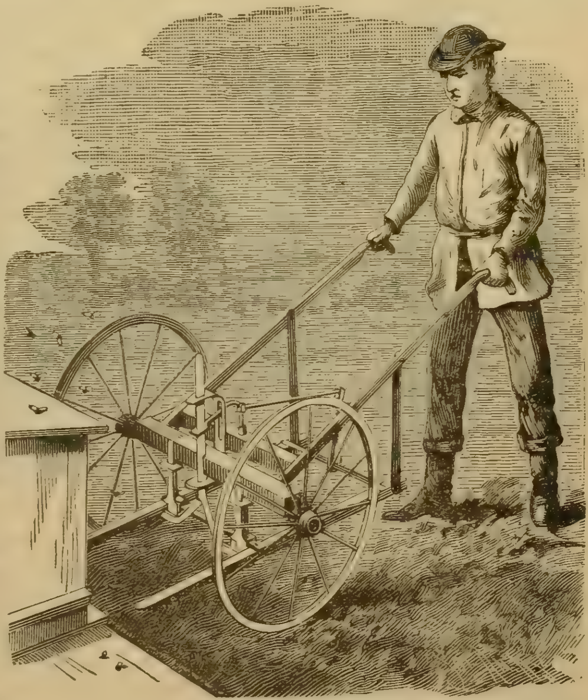
ALSO, A PLAN FOR HIVING SWARMS IN CONNECTION WITH THE CART.

IN regard to the usefulness of this machine, there is no guess-so work about it. I have tested it in my own apiary the past season, and am satisfied with it. I never had to call for help to move heavy hives this year. My way of using it has been this: I have all my new hives prepared and set on the stands they are to occupy; then at one side of the apiary I have some stands prepared *without* hives on them. Now we are ready for swarming. As soon as the swarm comes out, cage the queen, raise the cap, and lay her on the quilt inside; then as soon as the bees are *all* out, pick the hive up with the cart and wheel it away to one of the vacant stands; unload it there, and leave it for the present; now step around and pick up one of the empty hives, and place it on the stand where the swarm has just issued; and as soon as the bees begin to return, turn the queen in; and while the swarm is settling, the old hive can be opened, and the queen-cells cut out. Now, if the swarm is quiet, take the cart and carefully wheel it to its proper place; then return the old hive likewise, and the operation is complete. The cart can also be used for carrying the extractor, comb-bucket, tool-box, section-cases, crated honey, etc.; and when not in use in the apiary it makes a splendid plaything for the juveniles. We can furnish a *limited* number of these carts for $15.00 each, complete.

Now, Mr. Root, it is against my rules to "brag" on any thing I have for sale. I want it to sell on its *merits* alone, or not sell at all. I should like to have you and other bee-keepers say what you think of the machine. Your criticisms will be a great help to me. There is one mistake in the picture. It should show the cart approaching a hive resting on four half-bricks, instead of upon a bench, as represented. The picture shown is not of your humble servant. CHAS. R. THOMPSON.

Fort Omaha, Neb., Oct. 1, 1883.

Friend T., your cart seems very ingenious, and doubtless might prove quite handy in moving hives in the way you indicate. It seems to me, however, that we have easier methods of swarming than to lift large heavy hives about. Yet there are doubtless many who will like the plan you give. If I were going to move hives, I should very much like such a cart. For cellar wintering it will doubtless be a fine thing. Have the floor of your cellar covered with sawdust, and you could run your hives in and set them in place very quietly and easily. I should judge from the engraving that the cart is not well suited to other kinds of work besides hive-moving; and as you invite criticism, I will also take the liberty of saying that $15.00 seems to be quite a price for such an implement. If they were made by the hundred, at some manufactory, it seems to me they ought to be gotten up so as to be sold for about one-half that price. Nevertheless it is quite ingenious, and we thank you for the plan you give in regard to handling swarms.



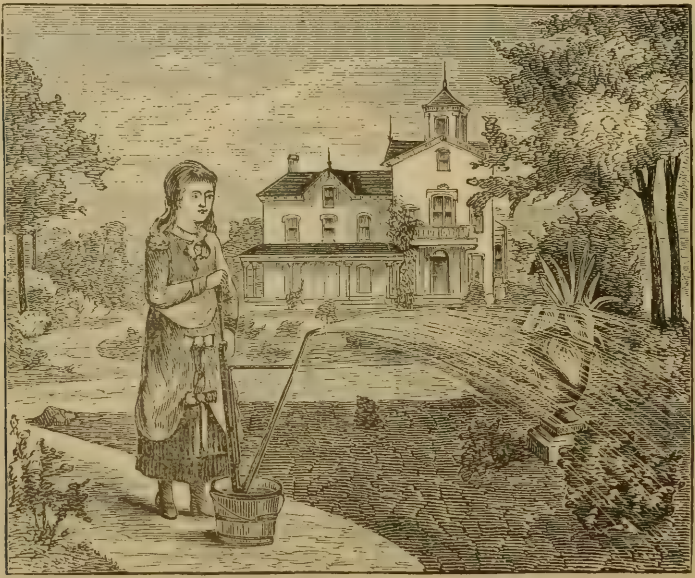
THOMPSON'S HIVE-CART.

Concerning this plan for natural swarms, it will be noticed that the result of moving the two hives as you mention is to leave the old hive finally upon its old stand, and the swarm is put into a new hive on a new stand. Well, friend Brooks' swarm-catcher accomplishes the same result, if I am correct, without moving the hives at all. All that is moved is the light cloth, and sticks that keep it in place. This seems a very simple arrangement; and as friend B. describes the plan, it would seem to be easily managed. But as we have had very few reports about the working of the device, I presume a great many who are accustomed to moving hives would find it less complicated. Hives we always have on hand any way, and a swarm-catcher might not be right at hand when the swarm issues.

A FOUNTAIN PUMP FOR A SMALL SUM OF MONEY.

SOMETHING THAT WILL ANSWER, EVEN IF NOT QUITE EQUAL TO THE WHITMAN.

A FEW months ago a friend sent us a fountain pump made of tin, with which I was so well pleased that we set the tinners at work making some which I thought we could make for about a dollar. Before we got any done, however, neighbor H. swooped down upon us, and said they had got a fountain pump down at "his house" that would "knock the spots" off from Whitman's, or ours, or any other. He said a man came along and offered to sell his wife one for 50 cents, if she would feed his horse and give him his dinner. Neighbor H. said so much about it that I asked him to bring it up. I took it out to the pump and gave it a good test; and, sure enough, it would throw water further and easier than the Whitman. The only drawback is, it can not be carried in the hand with a pail, as the Whitman can, to chase a swarm of bees. Besides it is made of tin, while the Whitman is made of solid, heavy brass. Nevertheless it is a splendid pump for a bee-keeper, or almost anybody else. I wrote to the patentee, and received the following circular. Below is his description, and I give you a cut of it:



SMITH'S NEW IMPROVED FORCE SPRINKLER.

SAVE YOUR PROPERTY, SAVE YOUR FRUIT, SAVE YOUR FLOWERS, SAVE EVERY THING THAT MAKES HOME PLEASANT AND PROFITABLE.

SMITH'S NEW IMPROVED

PATENT FORCE SPRINKLER,

The most perfect and effective hand apparatus ever invented for throwing water.

This sprinkler supplies a want long felt by all who are in need of a force sprinkler. In bringing it before the public, I dare say, since its improved construction, I am fully convinced that I have it perfect in every particular. In variety of service, simplicity of construction, and ease of operation, IT HAS NO EQUAL.

It is always ready for use, not liable to get out of order, and so light and convenient that it can be used easily and effectively by a lady or child. It combines all the features necessary for a first-class force pump, which is a very essential feature to be considered. The valve rim and hinge are made of copper. Nothing can get into the valve to put it out of order, owing to the perforated bottom. This is an article which no family should be without. The operation of the pump readily speaks for itself, for the many purposes for which it can be used, and thousands can testify to its usefulness. Owing to the great demand, I have been compelled to increase my facilities for their manufacture, and I am now shipping them to all parts of the country, and they are received with universal satisfaction wherever introduced. Many of the numerous fires that occur, attended with great loss of life and property, might easily be prevented were there some requisite means of applying water, which is at once supplied by the use of this pump.

It throws a strong stream fifty feet or more, while with the sprinkler attached it spreads the water in a gentle shower or spray. For washing windows and carriages, and showering lawns, gardens, and greenhouses, it has no equal. It is adapted to throwing liquid solutions of all kinds to destroy noxious insects and bugs of every nature, on plant, vine, or tree, and should be kept in every house, store, and factory in the country, for fire protection. In fact, in a diminished degree, it is capable of every use of an ordinary force pump, and far more convenient.

The best quality of charcoal tin is used in the manufacture of these pumps, for which the highest mechanical skill is provided.

PRICE REDUCED, $2.00.

Now, then, friends, for what shall I sell them? I have purchased 100 pumps for $50.00; so you see that the traveling agent paid for the pump with the 50 cents he received, and got his dinner and horse-feed free. At the same time, he conferred a benefit on neighbor H. in selling him one, even at that price. Now, although the patentee has fixed the price at $2.00, it seems to me that 75 cts. would be about what I ought to charge you, and I will furnish them to you at that price until he objects. I believe he will sell more pumps, do more good, and make more money, in asking 75 cents rather than $2.00. However, as it is his invention, I suppose he has a right to say what they shall be sold for. Now, in consideration of the above, perhaps it would be well, if you want one, to say so pretty quickly, if you want to get it for 75 cents.

* * *

FROM ITALY TO AUSTRALIA.

OUR FRIEND BIANCONCINI STILL PROGRESSING.

It is a long time since I troubled you with any bee news from this quarter of the globe, and I do so now more to show the skill and readiness to try to oblige of your old friend Charley Bianconcini.

Something more than two years since, I wrote him asking if he would try the experiment of sending queens to Australia; and if so, would he inquire at his end the best mode of transit. He expressed his willingness. Inquiries were instituted at both ends, and the Orient line of steamers, calling at Naples at short intervals (monthly), were selected for the experiment. Twelve queens were despatched in June, 1882, and arrived at Brisbane, Queensland, in August, being about 48 days cribbed, cabined, and confined, having to be trans-shipped at Sydney, New South Wales. On opening the little boxes, *five queens* were found alive. These were severally introduced to prepared stocks, with one exception, and did well. So far so good for a first attempt. Thus the second batch of Italians was introduced by the writer to Australia.

Having so far succeeded, it was determined to make another attempt for the present season, just commenced with us. So, on the 23d of June another parcel of 12 queens was despatched by Bianconcini from Naples. These were landed at Brisbane on the 10th of August, and must have been confined 49 days, some a day or two longer. On opening this parcel of 12, ten living queens were found, all lively, and some of the boxes had very few dead bees. I shouted, "*Hurrah Charley!*" All the ten queens have been safely introduced to prepared strong nuclei, and are laying well, little the worse, apparently, for their long confinement. No doubt when they have fully recovered they will put on a better appearance than when first relieved, although some of them are really fine queens.

Thus the difficulties have been overcome. Proper packing, good supply of water, and care on voyage, have secured for Australian apiaries a long-desired boon — the pure Italian. No doubt as this becomes known, and the excellent traits of these bees are better understood, great demand will arise for them. Bianconcini has our thanks for entering so heartily into the project, and in doing his part so skillfully.

CHAS. FALLWOOD.

Brisbane, Queensland, Australia, Aug. 30, 1883.

And I, friend F., want to say, "Hurrah for the two Charlies;" for I think you both deserve credit, do you not?

Bee Botany,

OR HONEY-PLANTS TO BE NAMED.

I SEND you a specimen of a plant found in the woods; very fragrant; bees working on it; from 3 to 5½ feet high; large leaf; it is nearly out of blooming. I should like you to name it.

Williamson, N. Y., Aug. 21, 1883. R. J. NASH.

Prof. Devol replies as follows:

Plant is probably *Collinsonia canadensis, L.* (horse-balm, rich-weed, stone-root); but from the specimen sent I am unable to say to a certainty that it is this. It grows 3 to 5 feet high, a little pubescent, leaves 6 to 8 inches long, ½ as wide, thin, acuminate, coarsely serrate, abrupt at base. Flowers in a loose panicle; calyx cup-shaped, with 5 slender teeth; corolla tubular, slightly two-lipped, upper lip 4-lobed, lower one longer. Stamens two, excerted; anthers much divergent; pistil much excerted, with a two-lobed stigma. It is a strong-scented perennial herb, flowering most of the summer, as is usual in *Labiatæ*. It is rich in honey. W. S. DEVOL.

Columbus, O., Sept. 15, 1883.

Please name this flower for me, and oblige

"AUNT CARRIE."

Prof. Devol replies:

Plant from Mrs. C. L. Stallard, Darter, Putnam Co., Ind., is *Daucus pusillus*, a plant nearly related to, and closely resembling the wild carrot (*D. Caroto*). It is a slender plant, 6 to 18 inches high, retorsely-hispid, leaflets pubescent, bi-pinnatifid, divisions deeply lobed with acute segments. It has a copious involucre of deeply pinnatifid bracts surrounding the umbel, which is 1 to 1½ inches broad; flowers white, central ones abortive; calyx 5-toothed; corrolla with 5 emarginate petals, those on the outer flowers larger; fruit oblong, smaller than that of the carrot, muricate with barbed or hooked prickles. Found principally on dry soils; common south. W. S. DEVOL.

Columbus, Ohio, Sept. 14, 1883.

AWARDING PREMIUMS AT OUR COUNTY FAIRS.

DUTIES OF JUDGES, ETC.

At our county fair we had a very good exhibition of bees, honey, and wax; also extractors and foundation machines. There were five or six different makes of hives, three or four of which were double - walled. There was a single - walled hive to which the judges gave the first prize. Almost every one thought it was unjust to others; also they gave the second prize to a colony of bees that had no queen, which I think was wrong; as the bees were on the ground about 28 hours before they were examined, there were no eggs, and there was a number of queen-cells ready to cap. I would like your opinion as to whether the judges ought to have given a premium on a colony without a queen.

Davenport, Ia., Oct. 1, 1883. W. W. HUNTER.

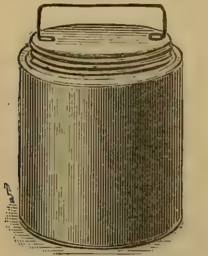
Friend H., I should hardly think that it was the thing to do, to award a premium on a colony of bees not containing a queen; but very likely the judges were not expert bee-keepers, as is very often the case. Perhaps this would explain why they gave the premium to a single-walled hive. Now, this is rather bad; but it seems to me it was not as bad as getting into the too common habit of finding fault with the judges at our county fairs, who, as a rule, work for nothing and board themselves. If they awarded the premium according to the best knowledge they had on the subject, what more could they do? Very likely it would have been better to have appointed bee-men as judges, and this throws the blame back on the ones who gave them their appointments. Now, then, do all who complain make it their business to be on hand at the preliminary fair meetings in the fall, and assist in having arrangements made as they should be? Are the men who are competent to fill positions as judges, on hand and ready to serve? If I were you, I believe I would submit to almost any thing, rather than find fault with the awards as they were given. Beware about thinking evil of your neighbors. I think it is many times far better to let wrongs go unrighted than to go to the other extreme of fault-finding. Is it not so, friend H.?

* * *

SOME NEW TINWARE FOR HOLDING HONEY.

MORE PATTERNS FOR HONEY-PAILS.

FOR two or three years back I have been thinking, every time a new honey-pail was suggested, "Well, now, we certainly shall never need any thing more;" but in a very little time something new started out; and as people preferred it, nothing else was to be done but to make it for them; and when the trade ran up into the hundreds and thousands, I began to think perhaps it was good to have something new under the sun, after all. I told you in the last number that the Jones honey-pails were exactly like the old ones, only that the tops screwed on instead of being slipped on as before, and being fastened with cement. Well, here is a picture of the improved Jones honey-pail. Prices are as follows:—

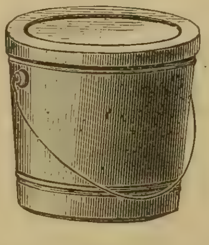


JONES'S NEW PAIL.

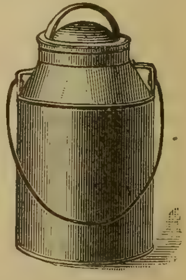
Capacity in pounds	Price of 1.	Price of 10.	Price of 100
2	6	55	$5 25
2½	7	68	6 50
3	8	70	7 00
5	9	88	8 00
6	10	98	9 50

These caps are made by machinery, and made so accurately that, when the cap is screwed down closely, it is almost honey-tight, without any rubber, waxed paper, or any thing of the sort; in fact, I believe the honey may be put into these pails, put out in the cold, and allowed to candy, and then it can be shipped and handled without any trouble, just as it is, and no amount of throwing it around would ever burst the caps off, as often happens with the former Jones pail, even if the caps are cemented.

By the way, while in a conversation with friend Muth on the cars, he told me that it seemed funny to think how long he and others had fussed with tumblers, pails, and bottles, to keep the honey from oozing out, before they learned how. The whole secret consists in filling your packages, and then allowing them to stand 24 hours or more before they are closed up. Unless you do this, the honey will be sure to ooze out around the caps or corks. He said he supposed it was owing to the fact, that the honey in pouring contained more or less air by a sort of mechanical admixture, and this air must be allowed to rise to the top and pass off, or it will push the honey out. Friend Jones uses rings made of paper, and these rings are dipped in melted paraffine, and then cooled by shaking a lot of them on a stick. When dipped so as to contain a sufficient quantity of paraffine, they are put under the caps before screwing down. I have never used them, for our caps seemed to be sufficiently tight without it.



THE IMPROVED DADANT PAIL.



THE MILK-PAIL HONEY-PAIL.

Here are some pails for honey that I found at a large tinware factory in Buffalo. The milk-can is made in two sizes — 1¼ and 2½ quarts. Price 10 and 15 cts. each respectively. Prices by the 100, $9.50 and $13.50. The advantage of this can is, besides being neat and attractive in appearance, the neck prevents the honey from slopping when it is put in in a liquid state. The utensil is also something that is wanted for milk in almost every family. The ones we have are very nicely made indeed. The other, which I have termed an improvement on the Dadant pail, is made sloping so that one pail will nest in another. They slip down inside of each other until they are stopped by their ears, and the covers may then be nested in a similar manner, and we have a package of honey-pails so solid and compact that it can be shipped at the rate of stamped ware, or about third or fourth class freight, while ordinary tin pails have to go at first class, or sometimes double first class. The price of this improved Dadant pail, which holds 2½ quarts, is $9.50 per 100. The pail is very nicely and strongly made by special machinery. It seems that this matter of getting tin pails to nest into each so as to get little bulk and low rates of freight, is something we shall eventually be obliged to adopt.

THE TORONTO CONVENTION.

(*Concluded from page* 595.)

SINGLE-STORY OR TWO-STORY HIVES.

FRIEND JONES, Prof. Cook, and Poppleton, held to one-story hives with frames spread out horizontally. I objected, and Mr. J. B. Hall was called on; said he used hives ever so many stories high. There seems to be a wide difference of opinion in this matter.

WHAT SHALL WE PUT AROUND THE ENTRANCES?

A variety of plans was suggested. I gave our plan; friend Jones mentioned ashes; but others said it made the grass and weeds grow too well. Mr. Hall prefers a board one foot wide, and two feet long. Although I did not have time to say so, I wanted to object to this board, on the ground that it would foster toads and other like enemies of the bees.

By a unanimous vote, the convention, on the second day, was devoted to visiting the fair. Mr. Langstroth was among us; and after the building had been viewed and reviewed, Jones and Clark introduced the bee-men to Mr. Langstroth. He shook hands with them as long as he could stand it, and then he was taken away to rest awhile. Knots of bee-men were scattered about, not only through the honey-house, but among the bee-hives and implements, and on the grass outside. Small discussions were held around at various points; and such a friendly, pleasant meeting it were hard to imagine anywhere but among a lot of bee-men. It seemed to be emphatically a season of giving and receiving knowledge. There was not much chance to argue with our Canadian friends, because they had only to point to their piles of honey to back up their special beliefs and ways of doing things; and I verily believe that no one feature on the fair-grounds attracted so much general attention as the apiarian department; and the way the questions were asked by young and old indicated strongly the amount of information that was given to whole crowds of people by the bee-show. In the afternoon we held a session again.

BEE-VEILS.

This matter was discussed at length, and there was a variety of opinions expresed; but I believe it was pretty generally decided that there is nothing yet in the market that is just what we ought to have. Silk and Brussels net, woven of *fine* thread with a large mesh, makes the best material to put before the eyes; but it is objectionable, because it is so frail. If we had something made of very fine wire, with a mesh so large that a bee could not quite get through it, it would come pretty near filling the bill, although it would probably obscure the vision more than the Brussels net. No such wire cloth has ever been made, to my knowledge. Somebody called me to order, asking how it was that I had so much to say about veils, when I claimed that I never used them. I replied, that my work and talk were principally for the benefit of the A B C class, and those whom I would not dare to advise to work with bees without the use of the veil.

L. L. LANGSTROTH.

At this point, Mr. Langstroth was ushered into the convention; and at a signal every member arose to his feet, while our friend was conducted to the Mayor's chair. The afternoon was consumed in speeches of welcome from our Canadian brethren, and responses from different friends. Mr. Langstroth concluded with some interesting facts in regard to his earlier experience with bees and bee-hives. Friend L. was feeling extremely well, and his remarks were given in his happiest vein of humor. Those who have never heard him speak can not well imagine the kind, pleasant, winning way in which he talks, and no one can for a moment doubt his disinterested love for all of the bee fraternity, as well as fervent and earnest devotion to the great God who gave us this world of wonders. In the evening, business was resumed as follows:

CLIPPING QUEENS' WINGS.

This, also, was discussed with much energy; while many prominent bee-keepers declared they would not have an unclipped queen, other apiarists there stoutly maintained that they wanted their queens to have the full use of their wings. I presume each man will have to fix his queens' wings to suit himself, as the matter stands.

AT WHAT AGE SHOULD A QUEEN BE SUPERSEDED?

Mr. Hall thought no definite age could be given. Some queens are young when they are old, and others are old when they are young; therefore we should keep queens just as long as they are profitable, and no longer. Mr. Langstroth thought that it seldom paid to keep them beyond two seasons, and also that the Italians generally reared their new queens as soon as the old ones began to fail.

BEST METHOD OF FEEDING BEES.

Mr. Jones advised granulated sugar, and recommended tilting the hive back and pouring the feed in the entrance in the evening. Mr. Locke recommended the Mason fruit-jar, with the cover perforated with a number of holes.

DOES FDN. DETERIORATE BY BEING KEPT?

Mr. Jones said it becomes hard on the surface, so that the bees find difficulty in manipulating it, but that if the sheets were dipped in water, just as hot as it could be without melting the fdn., they would be *annealed*, as it were, and would be worked by the bees just as quickly as if it were made the very day it was put into the hive. Others related their experience in regard to using old and new fdn.; and while some found it to answer well after it was a year old, others strongly objected. Friend Jones said a bee-keeper could make no better investment than to hang frames of fdn. in the hives in fall, so as to get them partly built out, or, at least, to get the bees to go over them before winter; these sheets would then be worth double price for use in the spring. From what experience I have had with this partly drawn out foundation, I should quite agree with friend Jones. The best plan of cleansing wax is to keep it some time melted in deep tanks. The finest wax can be dipped off first, to use for starters in section boxes, and the lower grades for brood-rearing; even that which contains considerable dark matter would answer very well for wired frames.

The third day was commenced by a discussion in regard to moth worms.

WHAT IS THE BEST WAY OF PRESERVING THE FRAMES FROM THE RAVAGES OF THE MOTH?

Many different experiences were given, and some of the Southern friends were inclined to think that the moth worm they have is somewhat different from the one we have. Prof. Cook replied, that only one bee moth was known to entomology. Different reports seemed to be caused mainly by the difference in temperature. Where the combs are kept a little distance apart they are seldom troubled much, even if left in the open air. Friend Jones suggested, that in building a honey-house the joists be put just the right distance apart, so that combs may be hung between them, resting on strips so placed as to catch the end of the top-bar; then when placed a little apart they are right under the eyes, or, rather, over the head of the bee-keeper, and he can examine them at a glance, and remove any single one without troubling the others. I agree here, and would warn bee-keepers about leaving combs tumbled around carelessly, or piled up one on top of another. This latter method seems to be the very best way for propagating the moth.

RIGHT TEMPERATURE FOR A BEE-CELLAR.

Mr. Jones used to think that 40° was about right, but now prefers from 45 to 50°.

WATER FOR BEES IN WINTER.

Prof. Cook says they tried giving bees water from a sponge in the winter, and colonies so watered were carefully marked, and every one of them had dysentery badly, while others came out healthy. Considerable discussion was brought out in regard to ventilation of bee-cellars.

ENAMEL CLOTH FOR BEES IN WINTER.

This matter was pretty fully discussed. While some think it harmful, others winter with a non-porous cover, without any trouble. The explanation of this will be found in a recent article by friend Doolittle on the subject, if I am correct. Mr. McKnight prefers ground cork for an absorbent, placed over the bees. The general friendly feeling that existed among the bee-friends present found vent in singing the doxology, before we adjourned for dinner. In the afternoon, the subject of—

PACKAGES FOR SHIPPING HONEY

Was discussed. Mr. Muth, with his large experience, gave some valuable facts. He said great losses were constantly being sustained by shipping honey in poor barrels. Second-hand barrels make a large amount of trouble. Friend Jones said he had also been troubled to get thoroughly tight barrels.

As I left about this time, I am unable to give further particulars. The convention will meet next year in Rochester, N. Y. The time is not yet decided on. I predict a larger gathering than we have ever yet had.

The treasurer, friend Muth, has furnished us the following list of those who joined the association by paying the sum of $1.00 each. If any mistakes have been made, please notify friend Muth, and he will be glad to correct it. This does not, of course, include the ladies, who joined without any fee.

S. S. Newman, Peoria, N. Y.
David Baker.
W. E. Clarke, Oriskany, N. Y.
Jud. Andrews, McKinney, Tex.
Thos. Pierce, Gansevoort, N.Y.
W. C. Pelham, Maysville, Ky.
F. Malcom, Inneskip, Ont.
C. E. Rulison, Flushing, Mich.
J. P. H. Brown, Augusta, Ga.
Mrs. " " "
G. W. House, Fayetteville, N.Y.
Frank Allen, Rowdon, Ont.
J. E. Stanley, Wyoming, N. Y.
Dr. Besse, Delaware, Ohio.
Miss " " "
R. S. Taylor, Lapeer, Mich.
W. F. Clarke, Guelph, Ont.
W. S. Porter, Greeley, Col
W. S. Hart, New Smyrna, Fla.
Prof. A. J. Cook, Lansing, Mich.
S. T. Pettit, Belmont, Ont.
Silas M. Locke, Salem, Mass.
G. W. Stanley, Wyoming, N.Y.
G. E. Boggs, Sonoma, N. C.
John Myers, Stratford, Ont.
Dr. C. C. Miller, Marengo, Ill.
S. C. McNeil, Belleville, Ont.
Jas. D. Long, Granby, Ont
Reuben Baker, Verona, N. Y.
D. A. Parmerton, Collins, N.Y.
A. I. Root, Medina, Ohio.
F. Whiteside.
Mr. and Mrs. O. O. Poppleton, Williamstown, Iowa.
S. Corneil, Lindsey, Ont.
R. McKnight, Owens Sound, Ont.
R. Harper, Norval, Ont.
Wm. Moorehouse, Dearborn, Mich.
Chas. Fayville, S. Wales, N. Y.
Mrs. " " " "
R. H. Myers, Stratford, Ont.
Mrs. " " "
J. B. Hall, Woodstock, Can.
J. E. Schantz, Bridgeport, Ont.
E. B. Ross, Syracuse, N. Y.
Mrs. " " "
John Baxter, Pickering, Ont.
Mrs. W. Bryce, Waterford, Ont.
Wm. V. Bosworth, Jr., Clockville, N. Y.
A. E. Gilpin, Halifax, N. S.
W. G. Russell, Millbrook, Ont.
Mrs. " " "
Edith " " "
H. F. Gates, Gerry, N. Y.
Rev. Wm. Blain, Tara, Ont.
W. H. S. Krout, Kennedy, N.Y.
A. G. Willows, Carlingsford, Ont.
H. S. Elkins, Kennedy, N. Y.
A. J. Russell, Millbrook, Ont.
Will Ellis, St. Davids, Ont.
A. Crichton, Arthur, Ont.
F. L. Smith, Chittenango, N.Y.
W. T. Falconer, Jamestown, N. Y.
H. Dobson, Simcoe, Ont.
L. Whitford, Stow, N. Y.
C. J. Corbin, Burdysville, Ont.
A. D. Allen, Marlbank, Ont.
Sam'l Wood, Neguac, Ont.
C. Humphrey, Rodney, N. Y.
O. Snyder, Allenport, Ont.
Anson Grove, Hespeller, Ont.
M. L. Spencer, Little Genesee, N. Y.
C. J. Haight, Rush, Pa.
S. S. Sleeper, Holland, N. Y.
Luther Corey, Yorksville, N.Y.
Edgar Mulholland, Glen Morris, Ont.
A. Douglas, Listowell, Ont.
C. B. Jones, Brantford, Ont.
W. H. Morrison.
I. P. Blakeley.
Wm. Nixon, Granby, Quebec.
E. C. Hubbard, Water Valley, N. Y.
J. H. Umpleby, N. Evans, N. Y.
H. Sipsell, Samel, Ont.
J. McGonnell, Waterford, Pa.
W. Harmer, Manistee, Mich.
W. L. Coggshall, W. Croton, N. Y.
W. E. Moulton, Alexander, N.Y.
Jas. R. Black, Garafraxa, Ont.
Jas. Anderson, Caledon, Ont.
S. G. Holly, N. Hamburg, Ont.
Mrs. " " " "
W. C. Wells, Phillipston, Ont.
G. W. Freeman, Blue Creek, O.
I. C. Nicholi, Kennedy, N. Y.
Mrs. W. S. Coggshall, West Croton, N. Y.
Wm. Buglass, Drumbo, Ont.
Jacob Spence, Toronto, Ont.
Mrs. " " "
Chas. T. B. Jones, Fern Ledge, Waterville, N. S.

Chas. F. Muth, Cincinnati, Ohio.

GOING HOME.

I left Toronto on the afternoon of the third day. As there was a number of bee-men on the boat, we had some very pleasant bee-talk. When almost to the town of Niagara, a pleasant-looking young man informed me his name was Cork.

"Why," said I, "are you the friend I am to stay with to-night?"

"No," said he; "you are thinking of my father, I guess."

When we landed I found another welcome from Canadian friends that surprised me a little. They were not expecting me, and friend Cork came out of the house in response to his son's call, with his GLEANINGS in his hand. I found a little group there who knew me almost better than I knew myself; for they had conned over and treasured up almost every little incident mentioned through GLEANINGS in years past; and especially were the Home Papers studied and loved. One thing that friend Cork said touched me deeply. I think he will pardon me for mentioning it here. He said he had followed the Home Papers so long that he had become accustomed to say to himself, during hours of trial and temptation, "Now, what would friend Root do under just such circumstances as these?" It took hold of me in a way I can hardly tell you, because it made me feel how poorly I was fitted to be held up in that way as a guide for others. I do not want anybody to follow me; but I do want all to follow the Savior, whom I love and have tried to follow in my own stumbling way.

We not only had peaches to eat at friend Cork's, but we went right out among the trees and picked them from the branches. I can not really get over the memory of friend Cork's peach-orchard. The only thing about it that made me feel bad was because I had not one at home exactly like it. Although we have had heavy frosts in Ohio, every thing was as bright and green and growing at friend C.'s, on the border of Lake Ontario, as it is here in August. A very nice apiary extended along the side of the yard, and friend C. said the bees had been coming in heavily laden the day before. He had followed them to an oak grove a mile or more away, but did not find what they were working on. The word "oak grove" waked me up; and early next morning, finding the bees were doing a land-office business, we followed them. We got into the grove, but — not a bee. Where could they be? They surely seemed to dodge into this wood. We walked in it, but no bees. Finally friend C. declared he heard them humming. If on one tree, why not on the others? Finally I heard them too, and then we discovered that they were on a kind of oak that had rough, dark, shaggy bark, with smooth shining leaves. The leaf had sharp points, or angles, whereas the white-oak has rounded points and angles, as you may know. Well, what were bees doing on these black-oaks, or yellow-oaks, whatever they were? If we undertook to climb the trees, we should tear our Sunday "trowsers" — at least, I should tear mine; and as friend C. is superintendent of the schools at Niagara, he was obliged to wear tolerably soft clothes too, and so we stared at the tree-tops, and wished for a ladder, with little hope of being able to get one by the time the train came. Did you ever! Just then a man drove up with a long ladder on his wagon, stopped his team, and he and his boy carried it over to us, and friend C. was soon throwing down branches of oak with honey-dew blotched over the leaves. Why are people so accommodating in Canada? and how did this honey-dew get on those leaves without there being any on the leaves of the white-oak — that of which the forest was principally comprised? Friend C. solved the conundrum about the man and the ladder, but none of us could do so in regard to the honey, for he could not find a single aphis in the tree-tops; nevertheless there might have been some away up high. I do not think the bees got any honey from the rudimentary buds, as has been suggested. I wish friend C. would tell us what the quality of it was.

Two hours later, and I stepped on the train to take a closer look at the falls of Niagara. How I did want a bee-friend who knew all about it, or some other friend, to guide me! I got off at the railroad suspension-bridge, and thought I would take the path and go under the cliffs along down by the river. I did so; and when I found the perpendicular rocks towering away up above my head, I discovered that I could neither climb up nor get any further, and so I wasted another half-hour in getting back again. I was pretty well tired by travel when I got back, and I was something like the boy whom the policeman found. He said he wanted his mother; and added, by way of explanation, that he told her when they went to the city that he knew she would lose him. Well, I found myself, and plenty of water too. You see, I was just going right up close to the falls, where I could look up and see the water come down. But I found two obstacles in the way. One was, I should be as wet as a drowned rat, before I even got there; and the next was, there was such a fog that I could not see any thing besides. Of course, I could get oil-cloth fixings to go out under there with; but while a body could not see, what was the use in going out there in the wet? On Goat Island there was not so much fog, and I had a better view. I soon took back all my first feelings about being disappointed in Niagara. I turned to somebody near with the remark, "Why, do you mean to say, my friend, that this keeps doing so always?"

It did not "let up" any while I was there, and I presume likely it has not yet. For a long time after, I could hear the roar and rush of the mighty waters, whenever I let my mind run back to what I saw during my couple of hours' stay. A glass of soda costs only 25 cts. on Goat Island, and a piece of pie and a sandwich makes it about 50 cts. They were very good, however, and my climbing up and down among the rocks, and over the rapids, gave me a keen sense of the "beauties" of such things, as well as a taste for the romantic.

In Buffalo, a few hours later, I enjoyed hugely a visit through the great factory of Sidney Shepard & Co. On another page I give you a picture of some of the tinware I found there that I thought would be nice to hold honey. My sleeping-car that was to take me home would not be ready until half-past nine in the evening. It was Friday night, and I had been away from home the better part of a week; had missed the Thursday-evening prayer-meeting, and to-night was our regular teachers' meeting. I began to be hungry for the companionship of Christian people, and the atmosphere of the prayer-room. Strangely enough, while these thoughts were in my mind I met a prominent bee-friend and his wife. The evening was pleasantly passed with them; and before I started for the train they had told me about a young minister who was laboring most zealously in their own neigborhood at home, and who had many times invited them to become one of their little band of Christ's followers. You may be sure that I seconded his appeal to them with all my energy; and when I shall hear from them, that they two are "on the Lord's side," it will be one of the pleasantest remembrances of my trip to Canada.

HOW I WINTER MY BEES.

A REPORT FROM THE MAN WHO WINTERED 241 COLONIES WITHOUT ANY LOSS.

JUDGING from the numerous articles in the bee-papers upon the subject of wintering our bees, one would justly conclude that we ought to be able to surmount all of the difficulties that have heretofore existed. But from the numerous inquiries I have received of late upon that subject, it is evident that, with the average bee-keeper, wintering is attended with much uncertainty, and disastrous losses are not uncommon, even among those who have had many years of experience. In view of these facts, I shall not attempt to tell you how to winter your bees, but will describe as well as I can how I winter mine; and in doing so I am aware I shall run against the *pet theories* of many very substantial bee-masters.

THE BEE-HOUSE,

In which I winter my bees will first claim a brief notice. The building is double walled, packed with seasoned sawdust 12 inches thick, with sawdust also on the floor overhead, making it frost-proof. It is divided into two or more rooms, one of which is used for an ante-room between the bee-rooms and the outside, and also through which the air must pass before reaching the bees, and thereby modifying it, *a la* sub-earth ventilation.

The house that I have used longest has three rooms — two in which to store the bees, with the ante-room between. This room also contains a stove, used for raising the temperature, expelling the moisture, and facilitating the ventilation whenever occasion requires. A scuttle opens into the chamber from the ante-rooms. The chamber is ventilated by a window in each gable, all of which may be opened or closed at pleasure. The ground floor is cemented upon a layer of pounded stone, and is as firm as a rock, thus preventing any disturbance by jarring. The windows are small, and provided with shutters inside, by which the rooms can be made perfectly dark. The doors are also double.

THE HIVE I USE.

This is a deep 8-frame hive, flat movable cover on top, open bottom, ⅜-inch bee-space on top of the frames under the cover.

CONDITIONS FOR WINTERING.

I prefer to have the bees breed late as possible, and go into winter with plenty of young bees, a good queen, and plenty of sealed stores gathered in the fore part of the season. I disturb them as little as possible late in the season, when they are disposed to become dormant.

SETTING IN THE BEES.

I set them into the bee-house as near the 15th of Nov. as the weather will permit, and let them remain until Apr. 15th, if favorable conditions can be maintained. I choose a cool but not cold day, having previously prepared the rooms by covering the floor with seasoned sawdust; then having lettered and numbered the hives with a piece of chalk, so as to render mistakes impossible in setting them out on the same stands again, I take each hive up from the bottom-board or stand, and carry them into the bee-house, and set them upon stringers, previously placed to receive them, so that when so placed the air will have free access beneath the hives, which are now bottomless. Having set one row around the outside, I lay stringers on the top of these, upon which I set another row of hives, and so on as high as I can conveniently set them. I use 2x4-inch stringers on the bottom, and one inch on the top of the hives. A thermometer is hung in each room, and a careful record kept of the temperature in the rooms, and also outside, visiting the rooms at least once each day for that purpose, noting also any thing I may think important.

VENTILATION.

The hives are ventilated only at the bottom. The rooms are kept well ventilated, and at a temperature averaging near 45°— somewhat below in the fore part of the winter, and above in the latter part. After being set in, the bees remain very quiet until some time in Feb., unless disturbed by an unusual warm spell.

Some time in Feb. there will be a noticeable increased activity, accompanied by a rise in temperature. This is an indication that brood-rearing has begun. If the weather continues warm for a long time, and the bees become very uneasy, I sometimes set them out during Feb. or March, and return them again as soon as they have taken a thorough flight; but I consider it of no benefit, if the temperature can be kept under control, which I endeavor to accomplish by opening the outside doors at night, and closing them by day time. I have observed, that when the temperature is quite low for some time after the bees have commenced raising brood, that a bad condition is almost sure to follow, and dysentery and spring dwindling are often the result. Therefore I am careful, at this time, that the temperature continue favorable for the brood, and the result is a hive full of bees when I set them out in the spring, and a considerable portion of them are young. If the temperature is inclined to continue too low, I resort to

ARTIFICIAL HEAT,

And from several years' experience I am satisfied that there is no means of ventilation for the bee-house in winter equal to artificial heat; and when judiciously used I think it will always be attended with good results. When the warm days of spring come, and bring the birds and the flowers, and the bees can find employment gathering pollen and honey, I feel that the time has come to set them out. Then on a warm pleasant day I set them each out upon the stand from whence they were taken in the fall, and the warmer and pleasanter the weather, the finer will be the condition of the bees; but if the weather is cold and damp when set out, a bad condition will be induced, however perfectly they may have been wintered. H. R. BOARDMAN.

East Townsend, O., Sept. 24, 1883.

Our friends will notice in the above report that friend B. secures downward ventilation, if that is the way to express it, by having the bottom of the hives entirely open. There is no question but that this arrangement will give all the ventilation they will ever need; and it also allows the bees to form a pretty warm cluster up in the body of the hive, from the fact that warm air always ascends. If the colony is a strong one, I should not fear that they would suffer from too much air. Another thing: The dead bees as well as the sickly ones drop out on the ground. I suppose, however, that this plan will hardly be practicable, unless their wintering-room is kept pretty well up to the temperature mentioned — 45°. Another secret of friend Boardman's success is, that his bees have the best of care and attention — in fact, he says he visits them *every day*. How many of us have the enthusiasm and zeal to do this? Another thing: He has perhaps 100 or more colonies in each room. This of itself would give a pretty even temperature — providing, of course, the room be properly ventilated. Then, again, he warms them up judiciously and carefully by artificial heat. How many of us are willing to take the pains to do this? I do believe it is a pretty wise idea to make the covering overhead pretty close and warm, and then give the principal part of the ventilation from below, allowing a space for dead bees to fall clear out of the neighborhood of the living ones above them. You will notice that friend Hasty is on pretty nearly the same track with his "vestibule," as he calls it. One thing is certain: We can not afford to ignore the moral taught us every winter by the reports of the bees that have wintered all right in hives cracked, split, etc. By the way, who has thoroughly tested the idea of wintering bees in the open air, without any bottom-board? Friend Hill, of the Bee-Keepers' *Guide*, has for years advocated a hole 4 to 6 in. square in the bottom-board of all his hives. Who will give us some reports in regard to this matter of abundant lower ventilation?

SOME OF THE PRINCIPLES OF BREEDING.

THE COLOR-LINE, ETC.

INDIVIDUAL experiences with the different races of bees and their modifications, strains, and crosses, may disagree materially. But, in all probability, nothing in these experiences, or the lack of harmony among them, will affect theoretical and established principles of breeding and development by descent. Hence in comparing results and arriving at a correct estimate of the experience of others, it is well to inquire how far these principles have been overlooked, and whether, in each case, the judgment has been founded merely on the ground beneath, or on a basis of broader extent.

It is very easy, from the coincidence of a few facts, to establish an impression that will circulate and grow rather beyond the bounds of careful reasoning; and a good example of this is the idea that a preference for golden bands among Italians must necessarily sacrifice the vitality, industry, and business value of the race, which impression is founded upon the coincidence of reports from several quarters, that the lightest or the best banded bees, while mild and harmless, are also inferior or useless. It now seems in a fair way of being generally taught, that we should disregard "bands" in the pursuit of "business." None can gainsay the fact, that profit is the main question at issue; but, let us consider whether that object lies in a different direction from color, after all. Yellow bands are not in themselves incompatible with hardiness, courage, and industry.

Of the four principal races of bees, three are acknowledged to be, in most respects, superior to the fourth. These three races are all golden-banded; the fourth, and inferior race, is black. This does not prove that bands are either the cause or the result of superior qualities; but it does prove that the two may be found together as contemporaneous development in the same race of bees.

If, then, the Italians can excel the blacks, though having a tendency to yellow in varying degrees; if the Syrians also can excel them, being even more fixed in their yellow marking; if the Cyprians, as is claimed by some, surpass them all in length of flight, and value in times of scarcity, while they are thought to be perhaps the brightest and yellowest of all, how can we base the claim, that, to perpetuate the color of the Italian race of bees, is to lose its vitality? and, conversely, if a darker-colored Italian is worth more than a light one, why is not a black one worth the most of all?

It is an established fact in science, that nature can develop different characteristics of a species together, even though they have no dependence on each other; and scientific breeding is but a more rapid transit over nature's road. The feathered legs in Asiatic breeds of fowls have no connection with the size; and the "breeding-out" of vulture hawks has not, therefore, involved any reduction of vitality or of weight. The careful selection and breeding of games and bantams into different races, founded on strict standards of color and marking, has not affected their well-known fighting tendencies in the least. The gold-laced and the silver-laced sebright bantams, the most carefully and wonderfully bred of fowls as to coloring, are among the most saucy of the race, not considering the regular game-bantams. In the same manner, some of the most golden and most tractable of the Italian bees are also among the most industrious, and their bright yellow mothers are among the most prolific to be found.

How, then, it may be asked, are we to account for the inferiority of some of the brighter strains of bees? and wherein lies the danger — as I admit there is danger — in breeding for yellow bands? Geo. E. Waring, deprecating the practice of breeding too exclusively for black points in Jersey cattle, said in substance that he did not charge that a Jersey cow with black tips to her horns, a black nose, black hoofs, and a black switch at the end of the tail, could not be as good a dairy cow as any. He only feared that fancy breeders who did not add up their columns of profit and loss might, in their craze for this peculiarity, forget all others. In other words, that, being in possession of cattle with good black points which *happened* to be inferior for butter, they would breed from such stock just as extensively as if its dairy qualities were the very best; and that thus the strains with black points were liable to deteriorate through carelessness, and not from their actual demerits. This is exactly the fact with Italian bees. Those breeders who do not care for cash returns, or who care only to sell queens and bees that will take well at first sight, may breed from bright yellow bees, even though they are inferior in other points, and strains may thus result that will start a prejudice against bright-colored bees in general. But we can breed for more than one thing at once. When houdans first began to attract the notice of poultry fanciers, the crest was inclined to be irregular and even scraggy, and many straw-colored feathers were prone to show in the hackle and saddle of the cocks. Breeders, however, took the case in hand, and carefully bred out the straw color till the average houdan cock of to-day is of a beautiful pearly white and black, in the place of straw and black; and right along with this they so modified the crest as to make it compact and symmetrical, falling right, left, and backward, from a parting behind the comb. This breeding did not change them from non-sitters to sitters. It did not affect the fifth toe. It did not, that I am aware, decrease the size of the egg, diminish the prolificness of the hen, nor injure the quality of the flesh. Nature has done far more, and left us less to do with the Italian bee than was the case with the houdan fowl. She has brought it to us in a high state of advancement, having developed in common hardy, industrious, and prolific character, gentle disposition, and golden bands. Let us carry on the work as she has carried it, and breed, not for any one, but for all three. A. NORTON.

Gonzales, Cal., Sept. 24, 1883.

Thank you, friend N., for the valuable facts you have furnished us, and also for the happy way in which you have presented the whole matter. As you put it, so far as I can see, your position is correct.

HIVING BEES ON SUNDAY.

HOW CAN WE BEST REMEMBER THE SABBATH-DAY, TO KEEP IT HOLY?

I WAS much interested in your article on hungering and thirsting after righteousness, and am much interested in your efforts for the spiritual welfare of those under your care. The Lord bless and prosper you in this, more and more. The children were highly entertained with the JUVENILE, and I came very near thinking that your papers were both a necessity on the place. Now, I am not writing for the press; so let me ask you a few questions. I want to know how you can prove from the Bible that it is right to hive bees on the Lord's day. I never had one thought that it is right, and I was both surprised and sad when I saw that you advocate it. Are you right, sure, Bro. Root, that you are not wrong? We think that putting a swarm of bees into a hive is *work;* and the Bible, in speaking of the Sabbath-day, says, "In it thou shalt not do any work, thou, nor thy son, nor thy daughter, thy man-servant, nor thy maid-servant, nor thy cattle, nor thy stranger that is within thy gates." We are commanded to "remember the Sabbath-day to keep it *holy,*" and I can not see any thing holy in saving swarms of bees on Sunday. "Ye shall hallow my Sabbaths," seems to exclude the idea of saving bees. I know you are a busy man, and perhaps feel as if you have not time to read this; but with all your subscribers and patrons you must have a great influence; and what if you should lead them wrong? "Blessed is the man that keepeth the Sabbath from polluting it." "If thou turn away thy foot from the Sabbath, from doing thy pleasure on my holy day, and call the Sabbath a delight, the holy of the Lord honorable, and shalt honor him, not doing thine own ways, nor finding thine own pleasure, nor speaking thine own words, then shalt thou delight thyself in the Lord, and I will cause thee to ride upon the high places of the earth." Perhaps in the loss of Sunday swarms you might have the feeling of Amaziah when he said, "But what shall we do for the hundred talents?" Do you remember the answer? "The Lord is able to give thee much more than this." "Them that honor me I will honor." "The Sabbath was made for man." God saw that we would need rest, its holy influences, and the great blessings that would arise from giving to him, in obedience to his command, that time he required. It is a trial to a farmer to have his hay and fodder destroyed by rain on Sunday when he could save it by work; but it is doubtless his duty to rest, and let that which he has earned by hard labor go to loss rather than work on the Lord's day. I once lived near a foundry, and the owner thought, or acted as if he thought, that it was necessary to keep the work going on, on the Sabbath. He thought that it never would do to let the fire get low on Sunday, it would take so long to get the furnace heated up again. He had some unconverted young people in his employment, and at one time they attended church, and seemed much interested. One young man in particular seemed anxious for the salvation of his soul, but the work must go on day and night on the Sabbath. Whether this young man or his comrades who were so anxious to attend church ever became Christians or not, I know not; but the busy owner of the foundry has long since been laid in the grave; and unless he was much changed from what he was, his soul never attained to the rest above. The foundry has stopped, and the roar and din is no longer heard; but who can tell if some of those youths whom he compelled to work on the Lord's day are not now in turn compelling other youths to violate the Sabbath, or, at least, using such an influence that they do it? The Lord showed by his laws for the Jews that he loved kindness to the poor. You remember that gleanings were left for them. Now, why could not the swarms which fly away on Sunday be counted as gleanings for the poor who might find them? and, indeed, if a wealthy man would take the trouble to get them out of a tree afterward, and we knew they were ours, we might cheerfully resign them, and feel that we had God's approval.

The idea, Bro. Root, that work *must* be done on Sunday is doing much harm in the world. While we are sitting in the sanctuary on the Sabbath-day, enjoying the prospect of heavenly rest, how many of our fellow-creatures are hard at work — and many with aching hearts, too, just on account of mistaken notions about the necessity of work being done on the Sabbath! Now, if all the Christians would plant their feet on the ground that God's blessed day shall be kept holy, and would do all in their power to prevent its desecration, it would do a vast amount of good.

If once all the lamps that are light
  Would steadily blaze in a line
Wide over the land and the ocean,
  What a girdle of glory would shine!

So, lift your lamp higher, my brother. Your words of Christian encouragement have done me good. They have doubtless done good to many others. I thank you for them. God bless you in every effort to do good. Allow me to add but one more verse from our precious guide-book: "Abstain from all appearance of evil."

I hope the tickets you gave me will do much good. I could send many of them to the colored Sabbath-schools around where they would be highly appreciated. Remember our work here among the colored people in your prayers.

MRS. M. A. TAPLEY.

Columbus, Miss., Sept. 18, 1883.

I thank you, my good friend, for your kind words on this question that has seemed to lie near the hearts of so many of our bee-men and bee-women. By all means, let us hold to the command, to "Remember the Sabbath-day, to keep it holy." I confess I feel troubled about arguing on a matter so important and so sacred; and before I attempt to answer, I pray that the kind Savior may guard me from saying any thing that might have the appearance of argument or controversy. You will remember, dear friend, that our Savior vehemently reproved the Pharisaical class that seemed to hold to the letter of this law, without having the spirit. You will remember, too, that they with awful presumption presumed to dictate to Jesus what he should do on the Sabbath-day, and what he should not do. They found fault with him because he healed the sick, and did good, as if their foolish interpretation of the law were higher authority than the word of the Lord and Savior himself! They also found fault with his disciples because they plucked grain on the Sabbath-day; and you remember what he told them. I presume you know, too, that there are very difficult points to decide in this very matter. For instance: Your position might be carried to such an extreme that cows should not be milked on the Sabbath-day. Of course, every one admits that farm stock must be fed, and animals should not be allowed to suffer. Well, if this is so, who shall draw the dividing line, and say what labor is necessary, and what is not? It seems to me, as I said, that it is proper to hive a swarm of bees hanging on a limb, even though it be on the Sabbath; yet it seems to me I should hardly want to remain away from church, or ask anybody in my employ, for the sake of saving the bees that might come out. I do not believe in running factories or railroads on the Sabbath. In regard to harvesting grain, although I should hardly want to dictate to others what their duty is, it seems to me I should never feel right to be found in the harvest-field on the Sabbath-day. A very good friend of mine, and the one who first led me to the Savior, in fact, had a very wise way of answering such questions, as it seemed to me; and this answer was, to tell every inquirer to do that which he thought would give the most honor and glory to his Savior.

My natural disposition is restless, and I want to be busy at something. I used to think, that, if I became a Christian, I must sit down and read all day Sunday, or listen to sermons. Now, I can not tell you how it rejoiced my heart when I found, or at least thought I had, that God did not call on me to do any thing of the sort. I am as busy on Sunday as any day in the week, and surely as profitably employed. If one were to ask me, amid all my busy duties what ones I enjoy most, and in what way I feel God's approving voice most, I should say, with the inmates of our county jail. I often work very hard with them, for most of my talk is pleading and teaching. I suppose many might think that some of my talk with these friends was hardly the proper thing for the holy Sabbath; but for all that, I feel sure that in it I am doing the very work that God has especially called me to. If the heart is full of love to Christ, and a devotion to the cause of humanity, which always springs out of this love, how can one go very far astray? and if such is the case, should we not be very careful about deciding what course our neighbor ought to follow? If you think it wrong to hive bees on Sunday, I would say, by all means let them go; for no great harm can come to the bees, or to anybody that I know of, by so doing. But if I had a good neighbor whom I had every reason to think was following the text, "thou shalt love the Lord thy God," etc., and he at the same time thought it right to hive his bees on Sunday, or perhaps to even stay away from church to look after them, I should hate to find fault with him for so doing. In regard to the latter part, I might suggest to him my views.

Do you remember, my dear friend, which one of the virtues it was that Paul says is greater than all the rest? — "But the greatest of these is charity." Now, then, shall we not unite, by precept and example, to do all we can to induce mankind to "remember the Sabbath-day to keep it holy"?

BEES AND HONEY IN THE BLUE RIDGE COUNTRY.

ADVANTAGE OF LARGE WINTER ENTRANCES, ETC.

LAST winter was numbered as one of the severest here as elsewhere; but there was not a week when the bees were not out flying one or more days; and, judging from appearances, I don't think a table-spoonful of bees to the hive perished. At intervals through the winter, when the sun was bright, and bees out, I would examine the quilts, and those I found damp I removed — all but the under one—dried and warmed them at the stove, and covered the colonies again with the dry warmed cloths. The colonies with the widest entrance kept their covering driest, while one with a four-nick V-shaped entrance cut in the bottom-board was invariably very damp when examined, and had to be dried frequently. The colony I purchased late in the fall with but five or six frames, some of them only partially built out, leaving a wide vacant space at the back end of those frames, came through bright and lively.

The first day of March was a warm bright day, and the bees were carrying in natural pollen, which they found somewhere in the mountain glens. One warm day in early spring, when the bees were sporting in front of their hives, I noticed the Italians in the L. hive were showing no signs of life. I knew at once something was wrong, and opened the hive. There they sat, still and quiet on the combs, with scarcely a bee moving. Every drop of honey had been consumed, and the colony had huddled together with the calm of despair settled over them. With no honey in the combs, and no nectar in the fields, the little folk felt that death stared them in the face. I was not long in placing a shallow pan with warm syrup in the bottom of the hive, and the next day they were out as lively as any in the yard.

I had 500 lbs. of honey from 5 colonies, which astonished the natives, and they want me to get them "some of them Italian *king*-bees."

My season's experience in the "land of the sky" as a bee country, will make another and more interesting paper. E. E. EWING,

Highlands, N. C.

HOW TO RAISE BASSWOOD-TREES FROM CUTTINGS.

ALSO SOMETHING ABOUT SOWING THE SEEDS.

SINCE August number of GLEANINGS, wherein you state that basswoods can be raised from cuttings by an expert, with my name attached to the article, I have received quite a number of letters asking for the *modus operandi*, that others might become "experts." I would remark, by the way, that one needs just a little more than simply being told how to do a thing, in order to fairly succeed — much more to become an expert.

I answered some by letter; but now comes the "scratchetary" of the Ohio State Bee-Keepers' Association, Mr. Daniel Spear, asking for specific directions, through GLEANINGS, how to treat both seed and cuttings. So, with the editor's permission, I will tell all I know in about a minute.

First, you must know that the wood used for cuttings is of the current year's growth, and thoroughly ripened; cuttings not less than six inches long, and cut, in this latitude (41° N.) from the 15th to the last of October. Tie the cuttings in bundles of 50 each. Pack them in clean sand, in a cold frame, with tops down, butts within two inches of surface. Put on your sash, and cover enough to keep from freezing. As soon as weather begins to warm up in spring, say in March, uncover the sash each sunshiny day, and let the bed get warm, covering each night to retain warmth. Keep the top of the soil damp, but not too wet. As the weather grows warmer, the sash will often need to be raised and the bed aired, as it must not get *too* warm.

About the last of April or first of May take up the cuttings, and you will find the butts well healed over, and ready to root. Now put them in the propagating-bed, with good bottom heat, and in sharp sand. Keep the sand well moistened, and cuttings partially shaded when the sun shines hot. When I speak of propagating-bed, I mean a forcing-house, of course. I do not think they can be rooted out of doors, as we grow grapes, currants, etc. Any one who has ever grown roses from cuttings, or who understands the art of green-house propagating, can grow basswood trees from cuttings successfully. Now, in two or three weeks the cuttings will be rooted, and can be potted off, or transplanted at once to out-door bed, and the after-treatment must be good. Mulch them, and hand-pull weeds; water when the ground becomes dry, if early in the season; after they become well started they are quite hardy.*

Now in regard to the seeds: They are gathered in October, and either sown at once, or packed in sand over winter, and sown in drills in the spring. The ground is mulched, and weeds kept off by pulling, or with scuffle-hoe, not stirring the ground deep enough to reach the seed. The plants will not appear until the following spring, and a fair per cent will germinate. It is said that young trees yield more seed than old, but a larger proportion of the seed from old trees will germinate.

Rantoul, Ill., Oct. 8, 1883. **H. M. MORRIS.**

We have tried the seeds just as you recommend, friend M., but we got very few little trees. I think I would prefer to buy them of you, at the prices you usually sell them.

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*The point is this: If put out like other cuttings, the vitality will spread itself in top growth, to the detriment of the root; hence the object in starting the root first.

A LETTER FROM ENGLAND.

OLD FOGYISM STILL ALIVE.

I HAVE a few minutes to spare, and I thought I would drop you a line and tell you a few facts about bees here. They are in the same old channel they were thirty years ago. I have seen several lots of bees, and they are all kept in the old-fashioned straw hives, and all whom I have talked with know no other way. When I talk with them they look at me with a suspicious eye, and seem to think it can not be so. They keep their bees all summer; and when the winter comes they put sulphur under them, and then what they have (the honey, dead bees, burnt sulphur and all), what a muss! and they do not seem willing to learn.

This part, I should think, is a grand place for bees. The winters here are very mild. Bees live all winter on their summer stands, and they are now working, and I should think are doing well. The straw hive in use here is a small concern; will hold only about ¼ what my hive will hold. When I tell folks the amount of honey taken from my bees they seem to say to themselves, "This can not be true." They have no late improvements here for handling bees; they do not know any thing about the chaff hive or the movable frames, or the extractor, or the smoker, or any thing else for handling them; and I find there is not one as yet who knows any thing about the queen bee. All they do know is, they know bees will sting if you get near them, and so they let them alone.

I expect to call on friend Abbot next week; will then report to you about what he is doing. I expect to remain here in this place but a few days; will return to America about the 15th of October.

W. A. WICKHAM.

Murden, Kent, England, Sept. 18, 1883.

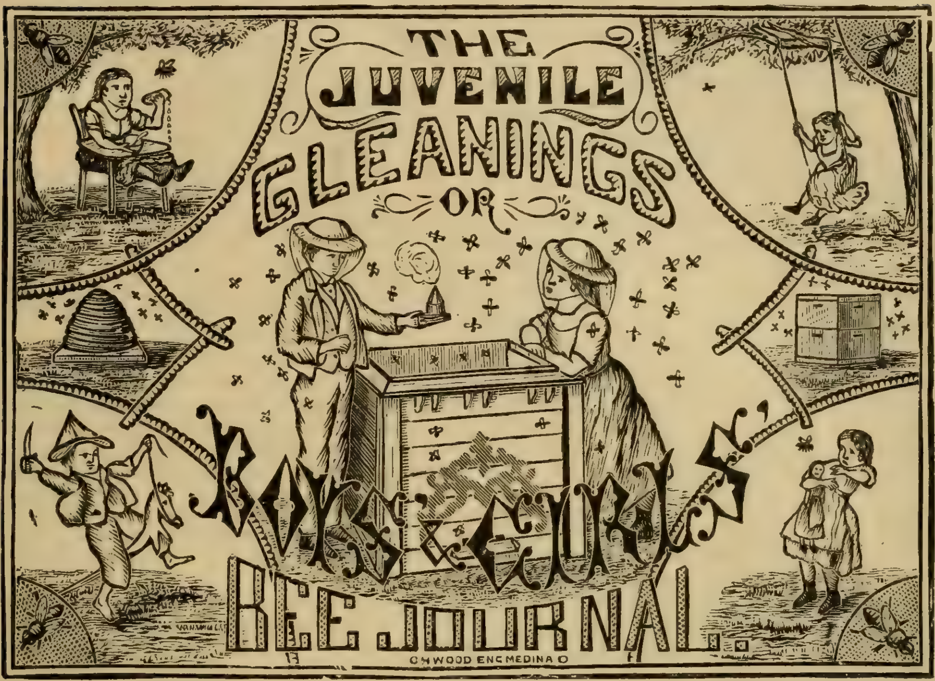
A HONEY REPORT FROM MISSOURI AND KANSAS.

SOME friend has sent us a record of the honey report of the Western Bee-keepers' Association, held at Independence, Mo., Sept. 20 and 21. The friends will notice, that although their reports are not extra large, the table indicates a progressive state of affairs both in Missouri and Kansas.

	No. colonies in spring.	No. colonies in fall.	Comb honey pounds.	Ext'd honey pounds.	Wax.
W. C. Harroldson, Buckner, Mo	40	80	2000	150	
Young & Lane, Lexington, Mo	175	475	3000	500	100
J. H. Fink, Independence, Mo	3	8		55	
Elias Ellis, Independence, Mo	10	20	400	300	5
Jas. T. Sale, Blue Mills, Mo	12	16	200	500	
C. M. Crandall, Independence	57	85	2000	800	25
Scoville & Anderson, Columbus, Kan	135	150		1500	
L. W. Baldwin, Independence, Mo	175	230	8750	2750	50
Jas. Nelson, Wyandotte, Kan	54	64	300	3000	25
Jas. D. Meadow, Independence, Mo	20	54		3000	100
Jas. H. Jones, Buckner, Mo	85	110	5400	1200	46
Sam'l D. Gregg, Kansas City, Mo	20	36	500	1200	50
F. J. Farr, Levasy, Mo	125	150	4800	1500	15
Jonathan George, Independence, Mo	58	84	2300	1000	20
Phidel Baldwin, Independence, Mo	125	165	8500	1000	25
W. B. Thorne, Johnson, Kan	18	30	400	900	
	1112	1759	38550	19355	261

Jas. A. Nelson, Wyandott, Kan., and Scoville & Anderson, Columbus, Kan., reported principally in the queen-rearing business. **H. SCOVILLE**, *Pres.*
C. M. CRANDALL, *Sec.*

GLEANINGS IN BEE CULTURE EXTRA.



He that is faithful in that which is least, is faithful also in much.—LUKE 16: 10.

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MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10: 29.

Whosoever therefore shall confess me before men, him will I confess also before my Father which is in heaven.—MATT. 10:32.

SOME years ago, when on my way home from my Abbeyville Sabbath-school, for some reason, I hardly know why, unless it is that I was full of the spirit of wanting to do good wherever it was in my power, I stopped at a house by the wayside. As this was not far from my father's, our old homestead, these people were, in fact, neighbors, and I stopped for a little neighborly call. They were elderly people, and had had sickness and affliction; but the saddest of all trials and afflictions was the fact that a son was an intemperate man. At one time he had done quite a flourishing business as a cabinet-maker, but he was induced to give up his trade and go into a saloon. I wonder if anybody ever prospered in a saloon. He soon became intemperate, and lost all he possessed. At the time I called, his family were in destitute circumstances, and the mother begged of me to give him something to do, that they might be relieved from want. In a few weeks more he was in my employ; and while on the way to the Abbeyville school one Sunday afternoon he told me some of his experience with the delirium-tremens. He had been off on an excursion. While I think of it, what is it about excursions that makes people drink oftener than at any other time? or why does an intemperate man want to go off on an excursion? While absent on this excursion he drank heavily; and on his return home it took him a day or two to recover from the effects of the deadly poison. While sitting quietly in the house one day he saw a lizard creeping along the floor. He was astonished to see it in the house, and began wondering where it could have obtained access. He soon noticed, however, a hole in the floor, and was more astonished still to see a knot-hole where he had never observed it. The lizard ran down the hole. Strange as the whole matter seemed, it never once occurred to him that it was not real, and he went for a hatchet to make a plug to stop out such reptiles. When he came back, the door-knob was spinning like a piece of machinery. Then he knew that his mind was impaired, and formed a resolution to reform; in fact, he began to fear the retribution of a just God. It was at this time that his mother spoke of him to me; and he told me, as we rode along, that it was his purpose to serve God the rest of his days. He did every thing, in fact, one could ask him to do, except standing before men and confessing his allegiance to his Savior. This he some way stubbornly refused to do—or, at least, he excused himself from so doing by a variety of excuses. He read the Bible in his family, had prayers, and seemed determined to take up every Christian duty, with the exception of the one I have mentioned. While he was in my employ his life was pretty fair; but before a great while he left, and started in business for himself. Like many another who starts out well, he got back into his old habits, and in time his poor wife died of a broken heart; and his family of children were scattered, and his poor old mother was brought down with grief and sorrow.

As years passed, he rallied again, married another wife, commenced his old business again of cabinet-making, and by an ingenious invention promised to rise up soon to be an influential man once more. Saloons were almost in plain sight from his place of business; and after about the usual time he was drinking again. Last Sabbath evening, while a second-amendment meeting was in progress but a little way from his home, a disturbance was made at his residence. The neighbors came in, and finally the marshal was summoned, and took him to jail. His poor wife, in despair of his ever doing any better, packed up her things, gathered up the available effects, even to pulling the beets and other valuables from their little garden, closed out every thing, and left. There he lies, poor man, in jail — deserted, forsaken, an outcast, with probably no ray of hope left. Delirium-tremens must be near him again, and the awful remorse tormenting him, and his past life reminding him that there is probably no use of struggling any longer against the temptation that has so many times crushed out every attempt he ever made to rise up and be a man like his fellow-men. When I see him again, what can I say to him, friends? His will power is probably pretty nearly all gone. He has promised so many times, and then broken the promises, that it would be almost folly for him to promise again. Where is there salvation or peace and rest for such as he? As I have been thinking it over this morning, it seems to me that the one thing that has been lacking in all his life was that he refused to stand up boldly and fearlessly before men, and avow himself a soldier of Christ. The Bible has said plainly,—

> Whosoever therefore shall confess me before men, him will I confess also before my Father which is in heaven.

Why is it that some men seem to struggle hopelessly against evil? I presume almost every intelligent boy or girl will tell you in a moment that no one does struggle hopelessly — that we have the power given us to do right or wrong, as we choose, and that this matter of life or death, of this doing good or evil, is a matter that we have in our own hands; that since the time God created us in his own image we have all of us had the power to choose. Joshua said, "Choose ye this day whom ye will serve." Now, friends, is it not a fact, that when a man has chosen — chosen honestly and truthfully, deliberately and decidedly, he is never ashamed or afraid to say so before men?

Whatever you do, boys, that is good, do it with all your heart. If you make a good resolution, keep it with all your heart; if you promise not to drink any more, keep the promise with all your heart; and if you promise not to use tobacco any more, keep that promise as you value your future happiness, and as you hope for eternal life. Beware of spoiling your will power by resolving, and then feebly breaking your resolves. Do every thing with the thought that God's all-seeing eye is upon you, and nothing can be hidden from him.

THE MOTHER-BEE.

MRS. HARRISON TELLS THE CHILDREN ABOUT THE DUTIES THEY OWE THEIR PARENTS.

CHILDREN, did you ever think about the queen being the bees' mamma? And did you ever notice how they cry when they lose her? They do not cry like children, but like bees: they make a mournful noise, and you could not help pitying the little orphans, if you heard their wail when they have lost her. They can do something that you can not — they can follow her scent; they can tell a leaf or stick where she has been. You have seen a dog follow a trail, have you not? I lately caged a queen, and tied it on to the grape-arbor, where they had clustered, and her children stayed by her, and fed her. I threw flour over them, and took their mamma into the house, and then I saw the white bees return to their hive.

Do you love your mamma? Oh! I know you put your arms around her neck, and tell her you love her; but when she tells you to bring in coal or water, do you start off with a pleasant face? If you love her, it makes you feel good all over to be able to contribute to her comfort and happiness. The bees form a ring around their mamma, just as you do when you play "ring around rosy," in order to keep off strange bees that might sting her, and also to wait upon her — bring her meals to her. While these bees are waiting upon their mamma, others go out and bring in water, bread, and firewood. Why, I see your hands all raised in holy horror, saying, "Mrs. Harrison has told a *fib*. Bees don't have any fire." Well, they get warmth in this way: They put honey into their stomach, which is their stove, and it makes a fire — warms them up.

Peoria, Ill. MRS. L. HARRISON.

OUR HARRY.

SOME OF HIS JUVENILE TRIALS AND TRIBULATIONS.

IN this letter I am going to tell you about our Harry. He is the cunningest baby that you ever saw. One day he had a very unfortunate time. Mamma and I were hoeing the cabbage, and he would have my hoe all the time; so I let him hoe, and I pulled weeds, and he cut one of my fingers with the hoe; and while I was gone to the house to tie it up he cut two of his toes; and as he went to the house to get them tied up, a bee stung him. Another day we were going to Ipava, and we were going to take him along, because his papa and three little sisters live there. After he was dressed he fell down stairs and made a big bump on his forehead; and as we were riding along, he fell off the seat and bruised himself some more, and after we came home he fell off the horse. He is my little cousin; his mother died when he was a little baby, and we took him to raise. He has been here two years now; he calls my papa "papa John," and his own papa "papa Lew." Every day we go down to gather hickory-nuts; and if anybody asks him how many he has, he says 8, 6, 5, 3.

ALL ABOUT THE WEDDING.

Last week I went to a wedding. The bride was my cousin; last summer she taught our school, and I liked her very much. She was dressed in cream-colored nun's veiling, trimmed in cream-colored silk lace, and she had a beautiful bouquet in her hand, and she looked very pretty. The bridesmaid was dressed just like her, but she was not so pretty; all the folks had little bouquets pinned on their dresses and coats, and they all kissed the bride, and wished her much happiness, and her mother cried. They had *six* kinds of cake for supper; the cocoanut was the best of any. The girl's name was Mary Ann. They gave her lots of presents, and the next day she went to her new home, and they had lots of folks there, and *seven* kinds of cake.

Vermont, Ill. **Jessie Chaddock.**

Thank you, Jessie. It seems to me, that if that baby Harry is so prone to tumble, it would be well to have somebody look after him pretty carefully, especially as he is a poor motherless little chick. Your description of the wedding is very lifelike. I presume there will be a great many smiles both by young and old when they come to read it.

A BOY'S LETTER.

WHAT HE THINKS ABOUT TOBACCO.

On Tuesday I sent for a copy of your Gleanings. Since then I have been to see Mr. Ballantine's apiary. From him I got the Sept. copy, and have read it almost through, and am well pleased with it. I was surprised when I read over the Tobacco Column, and found you were giving a smoker to all those who quit the use of tobacco, and promise never to use it again. Well, I think that is very kind of you, to give so grand a present as that. I do not use tobacco. I never did, and never expect to. Although a boy in my teens, I probably have many years' temptation before me. But I have resolved never to let it find its way to my mouth. I have no smoker yet, but I will not ask you to give me one to keep me from using tobacco.

Well, I must tell you something about *my* apiary. I worked away from home last spring and summer till I got money enough to buy 5 colonies of bees. I brought four of them home the first of Aug.; the other one I will not bring home till spring. I am feeding them granulated sugar every night now, to prepare them for wintering. I bought one of your A B C books of Mr. Ballantine, and I think it is worth five times the price of it.

How many colonies have you? Is it possible that you have so grand an apiary as what is represented in your A B C book? **N. A. Geyer.**

Sago, Musk. Co., O., Sept. 29, 1883.

I am glad to hear your good resolutions, my young friend, and I am glad you like the A B C book.—We have now about 200 colonies. We have just reduced them from something over 300. Our apiary is exactly as shown in the picture, except that it is not full of hives. The grapevines are all there, and the walks are just as you see them, except that the new factory has encroached upon one side of the apiary, and has somewhat marred its appearance; but Mr. Gray and the men are busily at work removing the debris, and restoring it to its original appearance as you see it in the A B C book.

JUVENILE·DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye, takin' notes;
An' faith, he'll prent it."

Like as a father pitieth his children, so the Lord pitieth them that fear him.—Ps. 103: 13.

I SUPPOSE, children, that many of you are aware that a good shepherd knows every sheep in his flock. To an outward observer they would look about all alike, and yet there is difference enough so that the owner knows each one, much as you do all your acquaintances. Stranger still, you can tell your friends without seeing them, by simply hearing their voices. You are acquanted with, may be, a thousand people or more, and yet no two have voices just alike. Still again, those thousand acquaintances would probably have their handwriting so different that no two would be so near alike but that you could distinguish one from the other. Well, it is not only in looks and voices and handwriting, but our dispositions are different. Even small children need different treatment; and I have begun to think that babies four or five months old need to be understood to be treated intelligently. I suppose you know what I am driving at. It is something more about Peter. And this is what I want to tell you about him: Peter has little peculiarities, and needs to be understood to know how to care for him. He is a nervous baby. I discovered some time ago that he would often cry, and seem to be in pain, where it was simply nervousness, or because he wanted to go to sleep and could not. Well one day I came in and he was crying as if in pain, throwing himself backward, and putting his thumb in his mouth and then taking it out again, and then acting as if he wanted something, he hardly could tell what. Even mamma failed in her efforts to soothe him and get him to sleep. I told her that perhaps papa could entertain him, and she quite willingly handed over the soft little burden. I took him in my arms, then sung a hymn while I walked the floor, swinging my body so as to give him a sort of rocking motion; in a minute he turned over against my breast, put his little pink thumb in his mouth, lay quiet and still, and in a little while more his baby troubles were all over, and he was sleeping the peaceful sleep of childhood.

What agency or power was there in his father's voice or his father's arms? had we given him any sort of medicine, we might have thought that the medicine had by magic soothed his distress; but he did not have any thing—no, not even little pills; but for all that, his troubles all seemed to vanish, and sleep came as if by magic. Perhaps I can explain a part of it by telling you that Peter and I have already become very good friends. He loves his pa, and his papa loves him; in fact, it does not seem as if the word love half told the story. You know how it is, the most of you; there was perhaps a sense of peace and rest came into his little heart by feeling his father's loving arms around him that perhaps nothing else in this world could give. You need not any of you think I am forgetting the mammas just now, for I am very well aware that a mother's love is above and beyond any thing that our sex ever knew, perhaps; but I want to emphasize the fact that a father may often relieve poor mamma; and when baby is tired and fretful, perhaps he can, for the time, easily do what she can not possibly do. The tired child sees its mother all day long, and the sight of papa is a change to it that is a little different; and God has intended that the father should hold a place in the baby's affection that is perhaps a little different from the mother's. He has such a power to soothe the pains and drown the sorrows of a little "chick," that no other one on earth can fill his place. Can you not remember, dear friends, the time when the privilege of resting on your father's arms with your head against his loving breast soothed and almost drove away sorrow, the earache, the toothache, or almost any other childish trouble or pain? The consciousness of that great love and willingness with which that father would give his life for you was perhaps one great reason why such a soothing quietness came over you when he with his strong nature undertook the task of comforting you in your little sorrows. Do you suppose God ever intended that you should look up to him as trustingly and fearlessly as you look to your father? Can you have faith to believe that God loves you as a father loves his children, or, if you choose, as you love *your* children? If you look back and think of it, you will recollect that you never feared your father might consider *you* a burden; his great love for you assured you to the contrary. You were not a bit afraid that he would ever think you intrusive or a bother, the least bit, in any way. He put out his arms, and you just nestled right down into them, and that was the end of it. Now, then:—

> As a father pitieth his children, so the Lord pitieth them that fear him.

HONEY FROM THE VINE-MAPLE; SEE PAGE 503.

We have not any vine-maple honey now, as we sold ours all off; but I will send you some next spring. I will send you some leaves of the vine maple. I have two brothers and one sister. The bees are doing very well now. CLARA M. WILCOX.

Salkum, Lewis Co., W. T.

A SHORT LETTER.

"Pa keeps bees," and has taken over 800 lbs. this year, and is taking more to-day. My baby brother is one year old to-day. ANNE FULTON.

New Berlin, Ill., Aug. 20, 1883.

A NEW USE FOR A BEE-HIVE BUZZ-SAW.

Our bees have done well for a wet season. Pa has taken off a belt and the saw from our sawing-machine, and put on an emery wheel for grinding plow-points. He has made lots of money; he charges 25 cents for grinding points.

MARY L. BEDELL.

Kawkawlin, Mich., Sept., 1883.

Well done, Mary. Your fact is surely a valuable one.

ORLAN'S REPORT.

We bought some bees this summer. They went to work right away. Their hives are full of honey, and caps too. They are young swarms. They have not swarmed any this fall. Pa sent to you for a bushel of buckwheat. It did well, but that frost killed it, and we shall not get our seed; but the bees got their share of honey out of it.

Geneve, Ind. ORLAN KRANER, age 12.

REPORT IN REGARD TO QUEENS HATCHED IN CAGES.

My father keeps bees, and I help him to watch them. They are Italians. He raises his own queens. He tried hatching them in cages, but thinks they don't do so well as when hatched in with the bees. He thinks the bees feed them as soon as they are hatched, and they make better queens. I have a little brother five years old, and he says he is going to be a bee-man. CHARLIE C. EVELAND, age 12.

Goshen, Ohio.

SORGHUM AND BEES.

My father has kept bees for a number of years. He has 11 swarms now, and he says he thinks he will have to sell the most of them. He commenced to make sorghum last fall, and thinks the bees will bother on account of the sweet.

NELLIE W. CAMERON, age 10.

Judd's Corners, Mich.

Friend Nellie, I do not think the bees would necessarily trouble about the sorghum. When they can find honey to gather in the fall, they will very often not notice the sorghum-mills at all.

Pa had two colonies of bees last spring; he increased them by artificial swarming, to 21. He packed them in chaff in the fall, and they are all living yet. We live on a farm; we raise a good many strawberries, and we like the Crescent the best. We have to go a mile and a half to church and Sunday-school. We have Sunday-school all the year; our superintendent has been in for four years.

Swan, Ind. BIRDIE SIMON, age 11.

HOW ETHEL POUNDED THE HIVE, AND WHAT SHE GOT FOR IT.

When I was a little girl, I went out and pounded the bee-hives, and the bees came out and stung me on my head so badly as to make me almost sick. Pa has invented an introducing-cage which he warrants to introduce a queen safely every time. Mamma would like a few of those little printed cards for her Sunday-school class; if you please, I would like Silver Keys. ETHEL DYKE.

Pomeroy, O., Aug. 23, 1883.

FLORENCE'S PETS.

We like to keep bees. Ma often hives a swarm without getting a single sting. I have 3 pets — a canary, a red bird, and a big white cat. I think the most of my cat. He will sleep in my lap; but the birds are afraid of me. We think you a nice uncle to send us JUVENILE GLEANINGS.

North Lawrence, Kan. Florence C. Smith.

LETTER FROM A LITTLE GIRL IN TEXAS.

I live in Eastern Texas; am on a visit to my aunt, who has bees. She gave me a queen in a little box, but she got away. Cousin John has caught me a little mule-eared rabbit. I am going to raise it. I expect some of your little readers would like to see such a rabbit. They look big galloping over the prairies. Addie Foster.

McGregor, Texas, Aug. 14, 1883.

FRANK'S LETTER.

Pa keeps bees; he has 8 stands. He got them so late in the summer he has not robbed them. They are all well but one, which the hybrid bees were robbing until pa put a queen-cell into it, and then in about a week he looked for the queen-bee, and could find none. He then put two queen-cells and a brood comb in it, closed up the entrance, and moved it. Frank W. Hunt, age 12.

Kirklin, Tenn.

THE HOUSE THAT HAS NO BABY IN IT.

I am interested in your talk about your baby. We have not any babies at our house, and there never were but two—brother and myself. He is in his 18th year. He has 6 fingers on each hand. Pa has got the smoker that you sent him. He is well pleased with it. He talks of sending for your A B C. Ma says that she is sorry when GLEANINGS is out. Anna B. Butt.

Shermansville, Ky., Aug. 15, 1883.

THE HARRIS FAMILY.

I saw your kindness in giving little folks books for writing letters, so I thought I would earn one too. My mother has five bees in the new hives, and they do well. We have one of your smokers, and we like it well. Berdella Harris, age 14.

My mother keeps bees. I have a little white dog; his name is Daisy. He is my pet, and I am fond of him. Victor Harris, age 6.

Richfield, Pa., Oct. 3, 1883.

THE SWARM THAT WENT OFF AND DIDN'T "SAY ANY THING."

We started with one colony of bees which came to us. The next year it increased one, and the next to 8; but 3 of them went to the woods. I have one swarm which I call my own. The last swarm came out and did not cluster, but they went right off. We were at a neighbor's, hoeing corn, and they came right up where we were, but they did not say any thing, but went right past us. I go to Sunday-school. Johnnie Hotelling, age 12.

Dansville, Liv. Co., N. Y.

I saw in the A B C book that you sent papa, a great many nice pictures. I saw yours and Blue Eyes' pictures. I think they are nice. I looked clear through the book to find the picture of that little "rosy-posey, chubby, dimpled boy-baby," but I could not find it. I reckon you were afraid to put his picture in, through fear I would come up there and steal him, if he is as pretty as Blue Eyes. I will send him a name, if it suits him. As David was a great king, and a righteous man, and Samson was a strong man, and could rob bees, I will call his name D. S. Root. How does that look?

Pisgah, Ala., Sept. 26, 1883. Josie Davidson.

I saw in GLEANINGS that you sent a book to any little boy or girl who wrote to you. Pa hasn't any bees, but he is going to get some before long. I am in the fourth book, and can do "interest" in arithmetic. I go to school every day. I have lost a quarter of a day since school commenced. I live close by two ponds. I had a dog which would fetch the cows and dive in the water for sticks, and someone shot him. I have read Robinson Crusoe and the Swiss Family Robinson, and Ten Nights in a Bar-Room. Freddy R. Matthews, age 10.

Houghton Beech Lane, Ont., Can., Sept. 24, 1883.

I can read JUVENILE, but can not write very well, so my ma writes this for me. My pa has 221 stands of bees, but they have not gathered much honey this summer. My ma is afraid of bees, but I help my pa sometimes. When two swarms go together he puts them in the shop cellar a couple of days, and then they stay in the hive all right. He has all the queens' wings cut off, so they can not fly away. We like to read Cyula Linswik's letters. She is my ma's cousin. I should like to go to school, but my ma thinks I am too little, so she teaches me at home. Connie Carhart Ward, age 5.

Fuller's Station, N. Y., Oct. 1, 1883.

You talk so kind to us, I should like to hear from you every day. Papa's bees are doing well, except some which go out and get drunk when papa makes cider, and they get killed, as did Mr. Henry Gent. Papa was not at home, and mamma had Mr. Gent go and see the doctor for brother. He got to drinking, and got shot and killed, and never returned. I think it very bad to get drunk. Don't you think so, Mr. Root? Anna B. Butt.

Shermansville, Ky., Oct. 2, 1883.

It certainly is the strangest of all things, Anna, that a man will destroy himself by means of liquor. Even the brutes know better.

HOW BERTIE TAKES CARE OF 50 SWARMS OF BEES.

My pa bought 50 swarms this spring, and they increased to 93. I have worked with the bees all summer. Pa hired Mrs. Potter to take care of them at first. I have taken care of them since July last. Pa has about 1800 lbs. of white box honey, and expects about 1200 more of fall honey. We would have had more, had it not been for wet weather in basswood. Pa has a hive of fertile workers. I get stung, but I don't mind it much. How many boys and girls have nuclei set up? I have 5. Bertie Loope, age 13.

I think, Bertie, you did pretty well if you took care of fifty swarms of bees very long; but perhaps at the time you took care of them they did not need very much care. Was not that the secret of it?

I am making a book of the JUVENILES, by sewing them together. The Aug. No. did not come. Please send it. Pa keeps about 90 colonies of bees, and 1000 lbs. of honey. He has built a new honey-room. I helped nail lath on it.

BEES AND PEACHES.

Pa thinks that the bees gnaw holes in the peaches. I think so too; for when I go into the peach orchard I see a cluster of bees around a hole in a great many peaches. I have a hive of bees. I have taken off 52 boxes of honey from my hive so far. My brother is a station agent, and I can telegraph some too. I have another brother at Philadelphia Dental College.

GEORGE H. DEUELL, age 10.

Bangall, N. Y., Sept. 23, 1883.

REPORT FROM AN ITALIAN NUCLEUS, ETC.

My pa has been keeping bees for several years, and I help him. We bought a three-frame nucleus of Italian bees the 29th of May. We built it up to 20 frames, and extracted 134 lbs. from it. We took 2 colonies out to our vineyard, half a mile from home. I watched them during the swarming season. I found several swarms hanging in shrubs. We increased those 2 to 10, but one went to the woods, which would make 11. **JOHN V. NEBEL.**

High Hill, Mo.

I have a writing-desk, and this is the first time I have used it. When papa comes home at night we put on our veils and go to see the bees; and when he opens a hive I can find the queen. Papa had six hives last spring, and 13 this fall. Grandpa and I went to sell honey, and we sold 60 boxes. I made my veil. I feed the chickens nights and morning, so papa can tend to his bees. I have another black-eyed sister. She can just stand alone. Will you send me a bunch of those envelopes on the three-cent counter, in place of the book?

Washington, Ct., Oct. 1, 1883. **LENA D. FENN.**

LETTERS FROM THE HAYES CHILDREN.

Pa had 13 stands of bees. I like honey. We have a fine locality for bees. We had a fine basswood harvest. You say a good deal about that baby at your house. Our baby can walk. Its name is Connie. Tell Blue Eyes that I have a little sister whom we call Blue Eyes, but her name is Lettie. I should like to see your baby. **LAUNA HAYES**, age 11.

Our bees are doing very well. I like to work with them. Uncle Amos, you said you had a pretty baby at your house. Please name him Caradene; that is my name. You wanted to know which you were to have — the letter or the black hat; you may have the hat, if you will come after it. Many thanks for that book. **HENRY C. HAYES**, age 8.

Sands, N. C., Aug. 30, 1883.

WHAT HAPPENED AT MAUDE'S HOUSE.

My pa has 50 swarms of bees. He took some honey from them to-day. Our house burned down four weeks ago last Thursday, and all of its contents. We saved only a little clothing, and we are living in the granary now. My ma has an uncle here living with us. He is 83 years old; and he drew the plan, and is overseeing it. **MAUDE B. LATHROP**, age 11.

Marshall, Mich., Sept. 8, 1883.

Well, Maude, that is a rather sad story you tell. But I believe I admire your independence in going into the granary to live, rather than to trespass on the kindness of one of your neighbors. The granary will do very well in warm weather; but I hope you will have a good warm house by the time winter comes.

A GOOD REPORT FROM THE SWARMING-BOX, ETC.

My pa keeps bees. We have 13 stands; we had 20, but seven got foul brood, and pa killed seven of them. Pa is a carpenter, and so when the bees swarm, when he is away at work, ma tends to them. We have a swarming-box, and we can pick them off from the trees nicely. Ma had a bed of French pinks, and the bees worked on them at the east end of the house, and did not work at the west end at all. We had lots of honey last year, and we have milk and honey all the time. **HARRY SMITH.**

Two years ago my papa bought one swarm of bees. He transferred them into a Langstroth hive, and the next spring they swarmed once, and pa gave them to me, because I watched them; and in the fall we put them into two chaff hives, and put an Italian queen in the new swarm, and last summer my little sister Mamie watched them, and the blacks swarmed once and the Italians three times. This is my first letter. Do you send boys books for their first letter?

Grafton, O. **LEON E. MATHEWS.**

HOW TO MOVE AN APIARY, ETC.

Last Oct. papa moved his apiary of 80 colonies about a hundred yards; he was perplexed at first as to moving them; but finally he hit upon a plan. He made a sort of a litter, and, placing the hive upon the center of it, I took hold of the longest handles, and papa the shortest, and away we went.

WHAT ONE FRAME OF BROOD AND A QUEEN-CELL DID.

I have a colony of bees that I built up from a frame of brood with a queen-cell in it, and 2 lbs. of honey. It was in 1881 when papa gave me the frame of brood, and last fall I took out 5 lbs. of extracted honey, and 35 lbs. of comb honey, making 5 lbs. of extracted honey at 10 cts. per lb., 50 c., and 35 lbs. at 15 c. per lb., $5.25, and the total, $5.75 worth of honey. **C. M. MORRIS.**

Rantoul, Ill.

NORA'S BEES AND HONEY.

I should like to see your little boy Peter; but I live too far off to come and see him. We have a little girl eight months old. Pa calls her Queen. I have one stand of bees that my pa gave me this summer; we have taken 669 lbs. of honey from it. Please send me a book. **NORA SHENEMAN**, age 9.

Pharisburgh, Ohio.

Thank you, Nora, for your kind words in regard to little Peter. — You do not make your figures very plain about your honey. If it was 669 lbs. of honey from that stand of bees your pa gave you, your crop must have been a regular "stunner," as the boys say; but if it was only 69 without the 100, it was pretty fair, after all.

HONEY SOURCES OF TEXAS.

Well, uncle, this evening finds me trying to write to you about bees, and what they make honey of in this part of Texas. They have made the most of their honey from cotton bloom this year, but they do make honey from black-jack and post-oak, prickly pear, wild locust, and elm. Pa bought two stands of bees about the first of February. They have never swarmed, but he separated them, and made 4 hives; but one did not do much, so we put them back, and then we had three stands. We extracted 125 lbs. from them. For a good while they did not do much good. Our bees are Italians. We got a queen from Mr. Arwine, and she was part black, so some of our bees are black.

FANNIE G. BOBO, age 8.

Bedford, Tex., Aug. 31, 1883.

We were looking over the hives a few days ago, and taking the frames out of the upper stories, to pack for winter. I had intended to make a regular report this fall, but have signally failed, by not weighing the honey just at the time it was taken from the hive. We increased from one to three colonies, and I suppose made an average of 60 lbs. of honey to the hive. I know I am within bounds in saying this much. The season has not been as favorable as might be — so many cold rains and very windy weather. Our bees appear very strong, and have brood and plenty of stores for the winter. Neighbor John McElwee has engaged in bee culture for a couple of years now. He has some twenty or thirty colonies in Simplicity hives, and other fixtures for working them to advantage, and has gathered a pretty nice crop of honey this season. I shall have to start to school now in a few days, and then for five months I shall not have much time to attend to the bees. Papa requests me to thank you for the nice cards you sent for the Sabbath-school. I have attended every Sabbath this summer, except the last, when I was not able to go. Papa hobbles along and gets there somehow every Sabbath; and when he gets to work in the school he appears for the time to forget his misery. V. J. FIELDS.

Valley Point, Pa.

BEES AND CHICKENS.

My pa has nine swarms of bees; they are making honey fast. Pa will have some honey to sell this season. Our bees are Italians. I had an old hen that stole her nest under a bee-hive, laid 14 eggs, and hatched them all. One morning I heard a most pitiful noise under that hive. It was those little chickens. I reported the same to my mother; she told me it was the bees stinging them, and that I must see to them immediately, or the bees would kill them. Accordingly, my little brother donned pa's bee-veil and mother's gloves, made a dive for those little sufferers under the hive, handed them to me, and I went to work picking out stings. I found their little feet just as full of stings as one could stick by the side of another, and even in their eyes were stings. It was a horrible sight to see, and hear the cries of those poor little chickens. I picked the stings all out. My apron was covered with them when I got through. Four of them died soon after. I don't like bees now. I think they are heartless wretches, to kill little chickens. Still, I like honey.

Zearing, Ia. ADDIE KING.

Do not be too hasty in condemning the bees, Addie. A great many quarrels come about from misunderstandings, and I guess that was the case with this one. You see, the bees did not understand what business the chickens had under that hive. They doubtless supposed they came there to steal their honey, so they just went for them as they would go for a bear or a skunk, or any other natural enemy. It seems pretty hard to have them sting those pink-footed chickens; but you know when bees get a going they just pitch in with all their might. They are like a raven Mr. Dickens tells about. Every little while he would cry out, "Never say die!"

Please allow me to write again. Our bees have not done so well this year, on account of dry weather. We have not had much honey to sell this year, and no swarms. But our bees are strong and heavy. They built up on poorland, parsley, and tangle-foot. The latter is now in bloom. Have you either of these great honey-producing plants in your country? Pa and I introduced an Italian queen about 10 days ago, by uniting the nucleus and the other hive; caged up the queen, and let her remain so for five days. When we released her the bees would not receive her, but balled her up; so we tried them with smoke. It made them turn her loose; but in a few minutes they had her again, so we had to cage her again. We kept her two days longer, and turned her out, and they let her alone. Then pa gave me the colony. So you will please enroll my name on the bee-keepers' list, and I will report how I come out. If you know what makes our bees do so badly, please let me know. Pa says every thing is decidedly in favor of the Italian bees, and intends to buy an imported queen of you before long, and is delighted with GLEANINGS. I love to read the JUVENILE, and wish good luck for all its little writers. NETTIE BRYAN.

Rome, Ga., Sept. 30, 1883.

HOW LULU GOT THE SWARM SHE FOUND IN THE WOODS.

My papa has nine colonies of bees. Last summer in my rambles through the woods after flowers I found a swarm of bees hanging high on a limb. Papa was too busy in the harvest-field to hive them, and mamma is not much of a climber, but I could not think of letting the little fellows leave, so I got one of papa's bee-caps and climbed the tree, and crawled out on the limb, and raked them into the box with my bare hand; as I could not climb with my bonnet on, I also laid it aside. I then climbed down with my box of bees, and took them home without getting a single sting. My pa takes GLEANINGS. I claim "baby GLEANINGS." If you think I deserve a book, please send me Ten Nights in a Bar-Room. LULU MAY TYLER, age 12.

Knob Noster, Mo.

Why, Lula, you are almost worthy of being called a bee-woman already. I am afraid there are not many girls, or boys either, for that matter, among our readers who could have done what you did. Were you not a little tired when you got down with them?

We have raised some queens by curious methods. One hatched in my father's pocket, and several under a sitting hen. One hatched in bed with me. The queen-cells were in little bottles, attached to the cork with wax. I thought, one night, I was hurt by some one's foot when asleep; but I suppose I was lying on the bottle. When I got up in the morning, the queen had hatched, and we soon had her in a hive. One of those from the hen's nest became a drone-layer — the only one we ever had. Our apiary has not produced much honey this year; but somehow the following verse has been produced while taking off boxes that should contain honey:

Hark! from the tombs when papa knocks his
Knuckles on the empty boxes.
They only give a hollow jar,
And seem as light as A. I. R.

Still, my papa took the premium on honey and on his extractor at the county fair.

ADDIE C. BARBER, age 9.

Lancaster, Wis., Sept. 30, 1883.

ORANGE-TREES, ETC.

My sister Mary wrote to you, so I thought I would write too. I can't write very well as I have to walk two miles to school, which is kept only eight months in the year. We have oranges on our orange-trees, but they are not ripe yet. We have apple-trees and wild blackberry bushes with blossoms on them.

There are a great many wild and tame flowers in bloom here, and the bees are gathering honey and pollen. Papa is using one of the wax extractors that he got from you to melt his wax in, and when all the wax is melted out we burn the waste and it helps to melt the rest. **Ella Porter, age 10.**

Sunny Side, Napa, Cal., Jan. 3, 1883.

HOW BELLA'S BROTHER FED THE BEES.

My brother keeps bees; he bought three colonies last summer, and one of them swarmed twice. He fed them melted sugar, as they had very little honey. He fed them in the evening, and put the sugar in dishes, and covered it with a cloth, and let the bees suck it out. I sometimes held the dishes for him. One day quite a large piece of the new comb fell off, and my brother gave me a piece of it to eat. I thought it very nice for such a young swarm of bees to make; but my brother said it was not very good. Now, will you tell me why that new piece of comb fell off? Was it because the young bees did not know how to fasten it on? **Bella Echlin.**

West Flamboro, Ont., Can.

I do not know why the comb fell down, Bella, unless it was some that they built from the feed you gave them. When bees are fed heavily they often fill the combs before they have time to strengthen them, as they usually do with honey they gather naturally, and then they break bown. Was it after they had been fed, or when they had been gathering honey? If the former, it would not be honey that you tasted, but only sugar syrup in honey-comb.

WHAT TO DO WITH LITTLE SWARMS, ETC.

My pa keeps bees; he has 16 stands. I help him take care of them. One day last September I found a little cluster of bees on a peach-tree, right over one of pa's hives. I thought they belonged in the hive, and shook them off two or three times, but they went back every time. My pa was gone. In the morning I told him, and he found them there. He put them into a hive with some frames of hatching brood, and they are now a nice swarm. There was not over a pint of bees in the swarm. My pa's bees come out a great deal in cold weather, and lots of them die. Pa takes Gleanings, and I like the Juvenile. I have two little sisters and one brother. My brother and I go to Sunday-school. I won the prize in my class, and I went for three months. Which is the middle verse in the Bible?

Chester X Roads, Ohio. **Lyle Reed,**

THE QUEEN WITH TWO YELLOW BANDS.

Mamma bought her an Italian queen from Mr. J. Q. Ayers. She has only two yellow bands. Is she a pure Italian? We thought there ought to be three bands. Mamma has a young queen, and has given me the old one and three frames of brood; they are hatching out nicely. We started with but one hive of black bees in the spring; now have five. The old hive was stolen about two months ago, or we would have had six. **Lizzie Witte, age 12.**

McGregor, Texas.

Friend Lizzie, we are apt to think a queen that has *any* bands has hybrid blood in her, or Holy-Land blood. The Holy-Land bees have so many bands that they are sometimes streaked, almost like a barber's pole. A full-blood Italian queen does not, as a rule, have any bands; but her worker bees should all have three bands. The color of the queen and drone has little to do with purity, for they are often just as they happen to be, and it is the workers only that are marked uniformly.

THE YOUNG QUAILS THAT WERE HATCHED IN A QUEEN NURSERY.

I live with my uncle, J. B. Rapp, the largest bee-keeper in Clermont Co., O. He has about 200 colonies of Italian bees. He takes Gleanings. I delight in reading the Juvenile. He buys a great many things of you. I heard him say that he met you at the bee convention in Cincinnati. We have a pet quail; we call him Bob White. When left alone he will whistle and hunt for us from one room to another. My uncle found the eggs in a meadow. Ten out of fifteen hatched. It was funny to see them run around in the nursery. They would see themselves in the sides, and pick at the tin as if they were going right through it. We have a new use for your smoker. Take and put tobacco in it, in place of rotten wood, and smoke the roses with it, to kill the aphides. I have no use for whisky and tobacco.

Whitcomb Motsinger, age 11.

Owensville, Ohio.

Thank you, Whitcomb. You didn't quite make it clear whether those quails hatched in the nursery or not. If so, it is quite an important fact. We are glad to know about your uncle, J. B. Rapp, for we have had a great deal of trade with him for a good many years.—Any bee-smoker may be used as a fumigator. Perhaps that is one way in which tobacco may be made useful. It is such a virulent poison that it is no wonder that it kills the insects.

ABOUT THE HONEY THAT GOT TIPPED OVER, AND DID NOT GET SPILLED, EITHER, ETC.

It is some time since I wrote to you, and I thought you might want another California letter. We live in the foot-hills, five miles from town. Papa goes to town every Saturday, and sometimes twice a week, for the mail. Papa sells honey every time he goes to town. We got the last Juvenile to-day. Papa has honey in two stores in town, and to-day he went in one of them to change one of the jars. When he drove up to the store there were several teams along the sidewalk (as it is just before Christmast), so papa had to leave his wagon outside of another wagon. He was not gone very long; but when he came, he found a man holding the horses, and another man picking up the things. It seems a runaway team upset the wagon, and spilled every thing on the ground. Tin cans, bottles, boxes that the bottles were in, comb honey, and the seat of the wagon all in a heap on the ground, but there was nothing broken. Papa says the wagon must have been completely upset, but it was all right when he came out of the store. He could have been gone but a few minutes. He didn't know any thing about the accident until he came out. The bees did very well in the early part of the season. Papa's bees increased from 60 to 80 swarms, and he took out 2500 lbs. of honey, mostly extracted. Papa was sick last season and the bees began to rob; and when he got well he doubled up the swarms, and kept doubling, until he has only 20 swarms left. Papa had to feed back about 300 lbs. of honey to the bees. He sold a good many queens last season, and he sold a good many of your extractors.

Napa, Cal. **Mary E. Enas.**

Our Homes.

The Son of man came not to be ministered unto, but to minister.—MATT. 20 : 28.

DID you ever think of it, friends, that there are just two things to work for in this world? You can devote your whole life to working for yourself, or you can devote it to working for other people. Working for yourself is, of course, selfishness; and I have sometimes thought that selfishness swallowed up all other sins. The whole spirit of the Bible, and of the religion of our Savior, seems to be against selfishness, and prompts us to work for others. You know the golden rule gives a big clip right in the other direction—"Thou shalt love thy neighbor as thyself." It is not readily apparent to us that serving Christ is really serving our fellow-men — or, at least, we seem to forget it. Jesus made it very plain in those beautiful verses about being hungry and thirsty and in prison, and without clothing, and sick. And then he says that everybody who gives relief and help and encouragement to somebody else in this situation does it to him. When you forget self, you remember Jesus; when you help somebody else, you help Jesus. You remember the time he was at the well. He came there thirsty, and asked a woman for drink. On account of a foolish prejudice she refused his request. Did it ever occur to you what a pleasant thing it would be to minister to the wants of our beloved Savior? Suppose he had passed by your door; suppose it had been your privilege to meet with the Son of God in human form — to behold him in his matchless innocence and simplicity of character. Who has not felt his heart bound almost at the simple thought of the privilege they enjoyed in those days, of following him? And yet, friends, we can follow him now. The question often comes up, "Why, I do not know how to follow him, unless I see him." We feel something as poor Thomas did when he was all the while asking to have it made plainer. He wanted to see God with his own eyes; and then when Christ was raised he demanded proof that would be satisfactory to his own senses and to himself. We often think if we knew just exactly what to do—if the way could be pointed out very plainly, as it was to poor Thomas—we would go right to work without hesitating a minute. Well, let us see if the way is not plain. What does following Christ mean? What did he do? Why, our little text tells us exactly what he did. He ministered to humanity; to the multitudes. Ministering means waiting on Jesus was a waiter. Were you ever a waiter, my friend? Sometimes at picnics there are a great many hungry ones to be fed. You may be hungry and faint. Perhaps you are in poor health, and it gives you a headache to pass the usual hour of mealtime. The healthy, eager multitude do not know this, and you do not want to explain it to them. Will you be a waiter, or sit down and have somebody else bring things to you? I think the first time I ever volunteered to act as waiter at such a place, it at once occurred to me that Jesus was once a waiter, and I decided I would be a waiter too, if they would let me help. I would minister to the wants of the eager crowd for his sake. Do you think I enjoyed it? Yes, I did. I thought of the time when the loaves and fishes were passed about; and as I made it a point to see who there was that had been passed or neglected (perhaps by accident), I watched to see if I could catch any kindly gleam from their faces, in response to my proffers of food and drink, or to bring them something that had not been passed their way yet. Do you know how it turned out, friends? Why, it made me very happy, and I enjoyed it more than I ever enjoyed a picnic before. Even though I felt faint, and I had a headache, just from the lack of my accustomed food, I thought perhaps some of those I waited on were needing food just as much as I needed it; and this thought made me happy. After we got through I enjoyed having my dinner with the rest of the waiters, and I felt kindlier toward them than I had ever done before. Now, friends, is it not so all through life? There are almost always opportunities to be waiter, if you want to be waiter. You can almost always find places to be ministered unto, or you can find places to minister to somebody else. Let me give you two little pictures from real life.

The first one is of the young friend in jail, about whom I have told you. He told me a few weeks ago he presumed they would send him to the penitentiary for three or four years; and he also said, in a sort of complaining way, that he had been told that no boy of sixteen was ever any better after having served a term in the penitentiary. I could have told him I was sure they would not send him for even so much as three years, as his offense was the first one, and he was only sixteen years of age; but I did not do this, because I thought it would be better to prepare him for a full term as well as I could; and then if the sentence were a mild one, he would be more likely to feel thankful rather than to feel bitter if it turned out to be more than he expected.

He was sentenced for only one year. I asked him if he was not thankful. He at first said he was; but he said it with such a poor grace that I felt sure he was not very thankful at heart. Finally he came out with it, and said he thought the laws were unjust and cruel, to condemn a boy of his age to the bad society of the penitentiary for so trivial an offense. I labored nearly an hour with him, trying to show him how much better it would be to thank God, and to thank the officers of the law for so mild a sentence, while, by his own confession, he was a deliberate and willful transgressor. He finally said that he ought to be thankful, but these ugly, rebellious feelings would come up, and *he could not help it.* How is it, friends? Could he help it? I asked if he always had been in the habit of paying all his honest debts. He replied at once that he had, and I think he told the truth. I asked him if he did not think it was always the best plan to pay all debts fully and squarely, even though it seemed sometimes as though they were hardly just. He said he thought it was, and the saloon-keepers who were there with him also agreed that the best way to get on in this world is to pay up all the bills one has contracted, and then resolve to do better next time, if the bills had been made foolishly.

Perhaps I might mention that these same saloon-keepers had declared that they would listen to none of my teachings, and had made plans to disturb me so much that I could not talk to them at all. I had especially prayed, however, that God would help me reach their hearts, and to impart at least one good moral lesson. The prayer was answered in just the way I have described. When I had got to pleading with Ellsworth, so that I had forgotten that they were in another part of the room — had even forgotten the noise they made moving chairs, etc., then they were attracted by our words, and very soon came over to listen. I turned to the one who seemed to be rather the leader among them, saying, "Mr. H., am I not right in telling Ellsworth to consider this whole matter a bad investment, and to pay the bill honestly and squarely, whatever it is, and then resolve to do better next time?"

"Of course, you are," said he at once.

"And is it not true, my friends, that all of you have made bad investments? and will it not be best for you to go to work cheerfully, and make the best of a bad bargain? The State of Ohio decides that you owe a debt which is to be paid either in money or confinement, or both. Now, without finding fault with the laws of our land, or cherishing any bitter feeling toward the officers who enforce the law, will it not be best to meet the bill in a good-natured way, and see that you do not make any more bad investments in the future?"

They all good naturedly assented, unless it was our young friend E. He asked me if I thought it was going to make him a better boy, to give him a year in the penitentiary. I told him I hoped it would. But he made a remark, something to the effect that, if they sent him to the penitentiary hoping to make him better, they would find themselves very much mistaken; but that if they would let him go he would do his best to live a different life, and do better. I had had a good deal of talk with him since his confinement, much in this same direction. He thought the laws were wrong, and the punishment too severe for a simple offense like his. He seemed to have no comprehension of the offense he had committed against God and against his fellow-men. To quote the language of the text, he did not propose to be a servant in any sense; he preferred rather to be ministered unto than to minister, even though the service that our country required of him was to serve in payment of a just debt. You see, friends, one who comes through the world demanding justice, and if his ideas of justice are human, to have it just in his eyes he would probably want considerable more than the strict line of justice. Jesus calls upon us to give more than is just. "And whosoever shall compel you to go with him one mile, go with him twain." Our young friend had doubtless come into all this trouble by getting a sort of feeling that the world owed him something — owes me a living," as you have doubtless heard it expressed; and when he got hold of that book about the life of Jesse James, Satan had persuaded him to think it a fine way of doing to appropriate that for which he had not labored, and to reap the results of others' toil. What a sad, sad sight it is to see any human being who has once got the idea into his head that the world *owes* him something!

I can think of three states of the human heart. The one is a disposition to want to get or receive more from the world than you ever give the world. A better and more just way is to want to pay for all you receive—to give humanity the *exact equivalent* of all that you ever receive from it. This is well, as I have said; but, dear friends, is there not a far higher and better way than either of these, in working to give *more* than you receive of every thing? You see, in this latter case, even if you should be selfish (and who is not?) you would probably be in no danger of overstepping the line of strict justice. How could we ever live and go on if every one should insist on full justice for every transaction? If there were not any Christians to bear and forbear, how would the world ever be held in check?

I now want to tell you of another young man I know of, who is only a little older than the one I have just mentioned. Two or three years ago my attention was first called to him by pleasant letters he wrote us. Like other A B C scholars, he used to ask quite a number of questions; but as he sent us an order for goods occasionally, we never thought of considering him troublesome at all. Well, one day he wrote a letter inclosing money to pay up his account, and at the same time said he would send on the extra dollar to pay for the time the clerks had occupied writing him so many times. It attracted some attention, because the course of proceeding was so unusual; and after that I began to consider his letters a little more closely. By and by he came to work for us, and I watched him to see how he held out. It seemed to be a natural trait with him to be willing to render the world full pay for what he received, and, to make matters safe, a little more if any thing. As he was a new hand, for some time he was changed about from one kind of work to another; and one day I noticed that he was helping to unload plank with two full-grown men. Boy as he was, in some way they allowed him to lift almost every plank from the ground, and then *they* took it. I watched him much of the afternoon, because I wanted to see how much he would bear without complaining. He never complained at all, but seemed to think it all perfectly right, although he did look a little tired at night. I changed him about from one room to another, and afterward inquired of the foreman what kind of a hand he made. The invariable verdict was, "Tiptop, Mr. Root; can't you let us keep him all the while?" May be you think, boys, it was an easy thing for him to bear his share, and a little more. Some of you may say it came natural to him, and therefore no particular credit was due him. I tell you, friends, it is not so. We all have selfish and lazy feelings, if we allow ourselves to give way to them. Elmer, for that was his name, happened to room with our friend Mr. House. Now, friend Elmer, with all his other good qualities, was not a Christian — that is, was not an acknowledged Christian, and this fact Mr. House soon discovered, and both he and myself had many talks with our young friend. He admitted the truths of Christianity, but was not quite ready; besides, he did not quite see the importance of fully committing himself. It would seem that it were a very easy matter for one who seemed to have the true spirit, to unite with Christian people and become a cross-bearer. But our friend Elmer, although he seemed willing to do almost every thing else, was almost stubborn for a time in this one respect. He became acquainted with our pastor, for, of course, he would attend our young people's meetings, and our pastor united with us in urging him to stand up before men as a Christian. One evening Mr. House talked with him till rather late at night, and closed by praying for him earnestly. To his great joy our friend yielded, and at our next young people's meeting many were the hearts that were rejoiced on seeing him rise up and express his determination to serve the Master henceforth and for ever. Did it make any difference with him? In some respects, friends, it made a very marked change. It gave him a new energy in every thing, and especially in seeking the good of others. It gave him an enthusiasm, as it were, for every thing good and pure, and an earnest desire to see all of his comrades give up every thing wrong and sinful. I do not mean by this that he ceased being a boy, like other boys; and I wish to mention one little incident right here, to illustrate this point. Friend Todd, of Wakeman, Ohio, made me a present of a basket of choice poultry eggs. The man who has charge of the warehouse and the poultry, very carefully put them under one of our biddies, which had the sitting fever, and we were watching anxiously for the eggs to hatch. One day I discovered the nest demolished, and the eggs gone, and my hopes in that line, of course, were blasted. Upon making inquiries, Mr. S., the warehouse man, said:

"Why, that new boy of yours tore the nest up and threw the eggs away."

"Why," replied I, "what in the world could have induced him to bother the hen? and why should he take such a liberty?"

I felt very much like scolding. It comes very natural for me to scold; and when I get into a scolding fit, I am very apt to forget what Paul said about charity. But then, it would not do very well to scold a young convert — one whom I had just helped to lead to the feet of the Savior. After my earnest exhortations to him he would expect, of course, that I would show a Christian spirit above all things. No, it would never do to scold him, although I could in no way think of any thing that could excuse him for breaking up my hen's nest. A voice within bade me "speak gently." I met him pretty soon.

"Elmer did you break up my sitting hen?"

"Why, Mr. Root, were those eggs any that you cared about?"

"Yes, Elmer, they were some choice eggs that were presented to me, and I was very anxious to see them hatch. How did you come to molest them?"

"Why, Mr. Root, I am very, very sorry. Some way, I do not know how, I got it into my head they were not good for any thing; and when the hen ran off while we were getting some straw to pack some goods with, I threw the eggs after her, about as we boys do at home. Just tell me how much they are worth, and I will willingly pay it."

I told him I did not want any thing; but as it was only a misapprehension, I asked him to let the matter drop. But it seemed to trouble him. Some time afterward, some bell-glasses were broken which he had packed and shipped, and he asked to be allowed to pay for them. I told him he might pay the wholesale price.

"No, Mr. Root, I want to pay just what you sell them for. You had your way about the hen's eggs, and now let me have my way about the glasses."

"But, Elmer, the fault may not have been yours at all. Perhaps the express companies handled the packages very roughly."

"No, I think the fault was mine, Mr. Root, and I want to learn to pack goods so they won't break, even if they *are* handled roughly. Please let me have my way about it. You had your way the other time."

And so I took the money he wished me to take, thinking to myself that I could take a part of it to keep the wheelbarrow full, just as I did the dollar he sent long ago.

Now, dear friends, I presume you see clearly the point I wish to teach. May be if you knew the young friend of whom I have been speaking you would see many faults in him, for I do not wish to represent him really better than or much different from average boys of his age, only he had this one strong distinctive trait: a disposition to be independent, or rather, perhaps, he did not want to feel that, in his passage through the world, he was taking more than his share, or encroaching on anybody. After he united with the church he seemed to have an intense ambition to learn, and to prepare himself for a life of usefulness. Although he was getting to be quite a valuable hand in the factory, before I knew it John and Ernest had persuaded him to go back with them to college. He is there now; and I am going to take the liberty of publishing an extract from a letter which he sent us.

You can very easily guess how I like "business" here; but lest you misapprehend, I will put the whole thing in a "nutshell" by simply saying that the object of the transitive verb "like," in the above sentence, includes *every thing*. I came here with great anticipations, and I have not been disappointed in the least. I like it better every day, and I think if I were to stay here a year, you wouldn't "know" me when I got back.

Every one here seems favorably disposed; and such a friendly sentiment prevails that I do not wonder that Oberlin has such a reputation. This is the place for those who haven't got "lots" of money, and are seeking after intellectual and *moral* development. I would like to write a little about details, etc., but can not take the time. Among the many favorable and pleasing features of this place, do you know what pleases me most? It is to see such prominence of Christianity,—"a city founded upon a *rock*."

E. N. L.

Tobacco Column.

I NEVER learned the filthy habit of chewing; but about three years ago I learned the filthy habit of smoking, and I have kept it up pretty steady ever since till a few weeks ago. While reading in GLEANINGS of so many throwing the foul stuff away, I concluded I could too; so I just laid the old pipe away; and, by the help of the good Being, I don't expect to have any of the bad weed in my mouth again. I will tell you a little dream I had. I dreamed that I was out at your house, and you and I were very busy talking; and before I thought what I was doing I took the old pipe out of my pocket; but I happened to think about your being so much opposed to smoking that I slipped it back very quickly in my pocket. D. P. HUBBARD.

Grayesville, Mo., April 16, 1883.

I am very much obliged to you, friend H., for your good opinion. I should be sorry to have anybody think he must not smoke, simply because I was around, for you know that would not be a very praiseworthy motive for giving it up. I wish to have you all act from the dictates of your own conscience. I am glad you have decided within your own heart that it is a dirty, filthy habit, even if nothing else could be said against it.

Please send me GLEANINGS and a smoker. I will abstain from the use of tobacco; if I should commence using it, I will pay for it. L. LAWRENCE.

Wayland, N. Y.

I have quit using tobacco, and I want a smoker. I promise not to use it any more. C. M. EATON.

Ithaca, Mich.

One of my neighbors told me to tell you he quit the use of tobacco, and claimed a smoker of you. I told him you propose to do that, and he has not used any for 5 months, so I reckon that I got him to quit. He says he will pay you $1.00 if he uses it again.

W. J. CROWLEY.

Roanoke, Texas, Sept. 14, 1883.

Having heard of your offer to send a smoker to any one who quits using tobacco, and would pledge himself never to use it again, I thought I would send for one. I used tobacco 3 or 4 years up to the 12th of Aug., 1883, and I found it was injuring me. I pledge you that I will never chew again. If I do, I will pay you for smoker. W. H. FROST.

Bloomington, Ind., Sept. 5, 1883.

SOUND ON THE TOBACCO QUESTION.

This makes 16 names in all that I have sent for GLEANINGS, and I may send some more. I should like to have some of those cards that you send out free. I will just say, that I quit using tobacco some years ago, but do not want a smoker, as I have a good one. I feel that I have been paid a thousand times already for its discontinuance. From my best recollection I think I have persuaded about one hundred to quit using it, and I expect to fight it as long as I live, for I think it is one of man's bitterest enemies. I have been township trustee for 27 years, and have helped send 125 paupers to our County Infirmary, and I think the chief cause was whisky, tobacco, and dogs. So you will not blame me for fighting it to the bitter end.

Martinsville, Ohio. AMOS R. GARNER.

I see by GLEANINGS that you are giving one of your smokers to all who quit "the weed." I learned to use it when a Kentucky boy, and kept it up till I saw that it would lay me in the grave, then quit it for ever. Years have passed, and I have not touched it, and have lost even my desire for it. I have had better health, am stouter, heavier, have an easier conscience, and can worship my great Master above with more satisfaction than before. If you think I ought to have a smoker, send to

JAMES E. BRADLEY,
Pastor of the M. E. Church, S.

Bastrop, La., Sept. 10, 1883.

Some men can be persuaded by a smoker! Alas, human frailty! Gentlemen, there are higher bids, among which are health, decency, economy, comfort of those around you; and above all, the future welfare of the dear little children nestling at your knee, and those that you meet here and there and everywhere. A father's influence is what saved me. He threw the pipe and "cud" away, saying, "It is a sin to use this tobacco." You have your influence, that will certainly reach some one. Use it to elevate, not to drag down. But if all these noble bids don't suit, take the smoker, by all means. Go on, go on, friend Root. If I can't pray for you, I can see the good that you are doing, and wish you well.

Your skeptical friend, J. SYKES WILSON.

Penrose, Ill., Aug. 5, 1883.

THE TWIN SPRINGS.

I am learning the bee business with the Messrs. Israel Bros. They take GLEANINGS and the *Kansas Bee-Keeper*. You sent a very nice smoker to my companion for quitting tobacco. I have quit also. I quit a week ago. Will you send one to me too? I am 19 years old. We have school here too. We work till noon, clearing up to plant grapes and fruits, and then we get our lessons, and say them under the shade of the trees. Then we work late in the day. We have two large springs here, and we call this ranch the "Twin Springs," because they are almost exactly alike. Please send me as nice a smoker as you did to my companion; and if I ever break my promise, to use no more tobacco, I will send you the money for it. JOHN E. JOHNSON.

North San Diego, Cal., Aug. 21, 1883.

I see by GLEANINGS you are giving a smoker to every one who stops smoking. About 3 months ago I quit using the weed; and if I ever attempt using it again, I agree to pay you double price for your smoker. About 2 months ago I purchased two colonies of blacks. I have entirely given tobacco up; I therefore look for a smoker. VALENTINE L. FREER.

Fly Mountain, N. Y.

Reports Encouraging.

GOOD REPORT FROM CYPRIANS.

WELL, friend Root, our fears of Blasted Hopes are over, and we stand as candidates no longer for that lamentable office. I have extracted, up to date, 130 lbs. of honey—pretty good, considering the great drought, which lasted from the first of March until the last of August—the longest ever known in the State. Our bees are now in fine condition, making honey rapidly from the squawweed and morning-glory. I extracted to-day 40 lbs.

of nice red honey. Our Cyprians are far ahead of the Italians. If we had had all Cyprians, they would have gathered as much again honey as they did. I will close this brief article (as it is my first) by telling you that I am an A B C scholar, only two years in the business. I am a brother of Dr. J. E. Lay, and superintendent of his apiary of 51 colonies.

JOSEPH R. LAY.

Hallettsville, Lavaca Co., Texas, Sept. 23, 1883.

Friend L., we are glad to hear this of the Cyprians, and we are also glad to hear more from our good friend Dr. Lay; but we are sorry to know that so many of our Texas friends have had such an up-hill time of it, this past season. Never mind; next year may give you another boom like that of last year.

In this country we get our surplus honey in Aug. and Sept. We are in the middle of a fine honey-flow just now from Spanish-needle, a rich fine honey. This is a grand, rich, and booming country, and fine for bees. Italians are ahead, or, rather, Cyprians, but they are hard to handle. A. R. LUPE.

Cherokee, Kan., Sept. 20, 1883.

REPORT FROM A BEE-KEEPER WITH ONLY ONE YEAR'S EXPERIENCE.

I do not want any one-piece sections of anybody's make, as long as there is any place to get those to nail. It is true, they are less labor to put together; but what good are they when they are, especially when they are fastened to the frames in the brood-chamber? for then they are liable to come apart and collapse when I am removing one section at a time, as I do as fast as they get finished.

As I am writing, I will give you my report, and a description of my hive. In the first place, I just began to keep bees this spring, although I bought two the 20th of last October, and brought them through the winter good and strong. I bought four this spring, and one queen and 2 lbs. of bees, with five empty frames, from O. Foster, of Mt. Vernon, Iowa, which I would call a daisy, as I have got, in all my hives, young queens from her eggs, so all the bees I have are of her progeny. Increased to 20.

Paid for 6 colonies and one nucleus	$ 40 20
“ “ Hives and frames	9 95
“ “ Comb foundation	9 15
“ “ Sugar for feeding	1 70
“ “ Paint and brush	4 25
“ “ Racks, sect's, glass, and sepr's	17 35
“ “ Novice extractor	8 50
“ “ Uncapping-can	2 00
“ “ GLEANINGS and *Journal*	3 00
“ “ Ex. charges and postage	3 75
Total expenses	99 85

STOCK ON HAND.

13 colonies @ $6.50	$ 84 50
Extractor	8 50
Racks, sect's, glass, and sep'rs	7 25
Uncapping-can	2 00
Honey	64 25
Sold 7 cols. @ $6.50	45 50
“ Honey	98 80
Total	310 80
Expenses	99 85
Profit	210 95
Average profit per colony	30 13

I did not weigh my honey; sold it at 30c. per section of 5¼x6¼x2, and 45c. per quart, and counted what I have on hand the same way. My hives are nothing but a Simplicity brood-chamber, without any bottom or top, set inside of a box made like a Langstroth hive, with portico and cap; height, inside, 18; width, 20; length, 24 inches. The advantages that I claim for this are: It is cooler in summer, for you can raise this outside box and let the air circulate all around; and in the winter you can fill this box with sawdust, chaff, or any thing else; and when you want to divide, I don't think they can be beat, for the outside appearance is the same, only moving the brood-chamber, the same as you have to move on account of robbing.

Quincy, Ill., Oct. 1, 1883. C. H. SMITH.

Friend S., we do not quite agree with you on one-piece sections. They are in use now the world over, and I do not know that I have heard a complaint before, such as you mention. Either your one-piece sections are very poor, or you have not the knack of handling them. As yours are rather large size, this may have something to do with it. —Your report is truly wonderful. I think you must have gone into the bees with some enthusiasm.—Your hive is virtually a Simplicity hive. I am glad indeed to know you have done so well.

WHAT ONE SWARM OF BLACK BEES DID IN A SIMPLICITY HIVE WITH WIRED COMBS.

How baby GLEANINGS has improved! It almost surpasses its mother, since the Home Papers have been added to its columns.

Last spring Mr. Samuel Palmer bought a full Simplicity hive, with wired brood-frames, sections, etc. On the 16th of June he put a swarm of black bees into the hive, and in just one month they had filled the upper story full of white honey, mostly basswood. He put more sections on, and they filled them again with dark honey, making in all 80 lbs. of comb honey, and have their lower story full to overflowing for winter. Of course, he reads GLEANINGS. My own colony of bees gave 105 lbs. extracted honey, and a swarm; they are Italians, and are gentle. I think almost as much of them as I would of a cage of canary birds. BELL R. DUNCAN.

Black Lick, Pa., Oct. 1, 1883.

This has been a fine season for bee-keepers in this part of Southern Illinois. Until the first of June the season was very unfavorable. Honey began to flow in, in almost unlimited quantities; then in the latter part of May I wrote you a rather gloomy account of our prospects. You answered in June GLEANINGS that I was "borrowing trouble," and chided me mildly for murmuring. God forgive me. I thank you for your chiding. See Psalm 143 : 5. Bees have increased very rapidly this season, and the sale of hives and other supplies has been large. I have sold a fine lot of my five-frame colonies; increased my stock from 40 to 85 colonies; have sold quite a number of queens, and my bees, during the week, have stored honey enough to winter on, and I am going to get considerable surplus, if the weather continues for a couple of weeks longer. So you see that we had always better wait and see before we complain. WM. LITTLE.

Marissa, Ill., Sept. 7, 1883.

Bees are carrying in honey by the ton from golden-rod. J. W. ECKMAN.

Rio Grande, Texas, Oct. 3, 1883.

I have 4 or 5 bushels of heart's-ease seed, the only honey-plant we have here in Neb., which I will sell cheap, and take goods. Heart's-ease has enabled me to take 100 lbs. of comb honey in 1-lb. sections from one swarm, and one of my neighbors to extract 300 lbs. from one hive. There are two varieties here — the white and the pink. The white does not secrete much honey, but the pink scents the whole atmosphere, and the honey can be seen and tasted very plainly in the middle of the day, and every fine day it is just swarming with bees.

SAMUEL L. STEVENS.

Beatrice, Gage Co., Neb., Sept., 1883.

I received the smoker and queens all right. I transferred the colonies, and introduced as prescribed, and they were received all right, and in 25 days had young hybrids flying. One colony, when I transferred, must have been queenless for 6 weeks or more, and did not have a queen-cell or any thing that looked liked it—not an egg, but 2 cards filled with pollen (the cells half full). Did you ever have any such experience? Do bees store pollen for winter use?

I bought an A B C book last spring, and 13 swarms of bees, for $50.00, in box hives, and have sold box honey this fall to pay for them, and have 29 swarms now, although one of my best swarms and 20 lbs. of box honey walked off a few nights ago to parts unknown.

My bees are set 4 inches from the ground, and I wish to winter on summer stands; we have a large amount of snow almost every winter. Would it be best to raise them one foot from the ground? Some in this part of the State winter in corn-stalks. What do you think of it? Did you ever use a goose-quill for brushing bees in hiving, or from combs? I think it the best thing I ever used or heard of. The quill should be from the wing quills.

Fairdale, N. Y., Sept. 22, 1883. R. B. PERKINS.

Six weeks is a pretty long time to have a colony queenless, friend P.—Yes, bees do store up pollen so it often remains in the hive over winter; but in your case it accumulated because there was no brood to feed to use it up.—I do not think I would put the bees any higher from the ground than they are now. The snow keeps off the cold wind, and is quite a protection; but be sure to have the ground so the water will run off readily when the snow melts.—We have used goose-quills for brushing bees; but a brush with some sort of vegetable fiber is considered better, as it does not irritate the bees as any thing approaching hair and animal fur does. You know, bees are a natural born enemy to bears and many other furry quadrupeds. We prefer the yucca brush.—We are glad to know you got your money all back, and a little more.

REPORTS ENCOURAGING ALL AROUND.

The imported queen received in splendid condition, and safely introduced, and is laying now. I will raise a lot of queens from her yet this fall. I have been extracting honey this week. Bees are storing it very fast from fall aster (or stickweed); the honey is lighter in color than the clover honey taken early in the season. We have a fine blue-eyed boy 4 weeks old, which is quite a new advent to our mountain home, as he is our only son.

J. H. THORNBURG.

Chattanooga, Tenn., Oct. 8, 1883.

Last spring I bought 5 stands of bees. They were quite weak. I put Italian queens in them, and from them I got 25 stands more, besides 300 lbs. of honey, and they are in good shape for winter. I bought $25.00 worth, and sold this fall $125.00 worth of bees and honey. D. H. HASKER.

Cambridge, Iowa, Oct. 9, 1883.

"Remindery,"

Or Department for duties to be attended to this month.

WHAT SHALL FRIEND DONNELLY DO WITH HIS BEES?

SHALL I let my bees die, or feed up 50 swarms? and how is it most easily accomplished? Bees have not made any honey since July, and have used up nearly all to raise bees. I have plenty of bees and young queens; but how to save them, please tell me, or it will be too late—how to feed and how to make it—candy or syrup, if sugar is used.

L. C. DONNELLY.

Valmont, Col., Oct. 7, 1883.

By no means let them die, friend D. It is true, it is pretty late in the season to get them right for winter now; but I think you can do it, if you set right to work. Feed them sugar syrup whenever the weather is warm enough to permit them to take it. The pepper-box feeder or the tea-kettle feeder will, perhaps, be your best way to do it. Double them up till the colonies are so strong that they can keep the hive warm under the influence of the heavy feed. Of course, if the weather is too cold to feed them liquid feed, then you will have to go back to the old plan of feeding candy, as described in the A B C book. Give them three or four lumps, the size of a hen's egg, or perhaps a little smaller, and cover them up warm with woolen cloths or chaff cushions. As fast as the lumps are used up, give them more. I would not give them a great quantity at once, lest it chill them too much in their efforts to work it up, for it must be warmed up by the heat of their bodies before they can use it. They will surely in the spring be worth enough to pay for all expenses and trouble; and doubtless you will have a good season next year. Although the matter has not been very fully tested, I feel quite sure that candy from powdered or granulated sugar and honey will be as safe as any thing. Knead it up like dough, and work it up into little biscuits, as I have before described. *Do not let the bees die.*

OBITUARY.

DEATH OF OUR OLD FRIEND J. OATMAN.

WITH much sorrow we have to inform you of the death of our dear father, on Oct. 1st, in his 71st year, passing home as he had lived, in *perfect* faith in his Master. He began his experience with Italian bees and modern management in 1871 having made a splendid success of the business, and loved it more than any other interest, giving his whole time and attention to it—left 600 colonies at his death. Very truly, OATMAN BROTHERS.

Dundee, Ill., Oct. 5, 1883.

This is indeed sad news. Friend Oatman has long been one of the veterans in bee culture, and his name was among the first among bee-men when GLEANINGS was started. Although he had his ups and downs in bee culture, like the rest of us, he held on to it undaunted, and eventually obtained his reward by becoming one of the most successful honey-raisers of the present age; and, what is of far more value than bees or any of this world's industries, his faith was firm and unchanging in the love and care of the kind Father to whom he has gone.

Juvenile Gleanings.

OCT. 15, 1883.

The Lord is my rock, and my fortress, and my deliverer.—PSALM 18: 2.

WE can still use postage-stamps; but as you can get the new postal notes almost as cheaply, we prefer you should send them rather than the stamps, unless it be *one-cent* stamps. *They* are always just as good as the money to us.

WE have just received our third shipment of 50 queens, direct from Italy. All came through alive but two, and we lost only one in introducing. We have between 50 and 100 queens to select from now, if you want to try your luck wintering an imported queen.

ANOTHER OVERSIGHT.

J. P. MOORE, of Morgan, Ky., says the insertion of his adv't in our last issue was a mistake on our part, and he wants it countermanded, and thus stop orders from coming in which he can't fill. Two "morals" are obvious here: First, mistakes will happen; second, GLEANINGS is the place to advertise. Friend Moore says he can fill no more orders for queens now.

BACK NUMBERS OF GLEANINGS.

WE have on hand several tons of old numbers, including 1880, and still older, which we can mail to anybody who wants them at 3 cents per copy; i. e., providing you take such as we have. There are a few numbers which we are out of, which we could not furnish for less than 15 cents per copy. These old numbers are fully illustrated, and contain very valuable communications from our most successful bee-men.

OMITTING THE NAME OF YOUR COUNTY.

QUITE a number of our friends still persist in omitting the county in giving their address; and some, instead of their county, tell what railroad they are located on. Now, friends, the express and freight companies will not receive goods unless the county is clearly given; and therefore we must again decline to be responsible for errors unless you give your county, as well as town and State. No one in the world can tell what county you live in as well as you can yourself; for with all the railroad and postal guides printed, there is a liability of getting them wrong. The name of your railroad does not answer *at all*, in place of the name of your county.

ALSIKE-CLOVER SEED.

SEVERAL are now asking us what we can pay for alsike-clover seed. I suppose you remember, friends, what a time we had last spring, and how it ran up to $15.00 per bushel. As it takes a great deal of money to lay in much of a stock of it, it would be a little dangerous to buy until we know something of what the crop will be. I have not as yet offered more than $8 00 per bushel; but if it doesn't come at that price, of course we shall have to pay more. If you will send me a sample of what you have, and tell me what you will take for it, we can soon decide upon some definite price; and it is quite desirable for all parties that some uniform price be established for a nice article.

THE ONE-PIECE-SECTION SUIT.

MANY are inquiring in regard to the progress of the suit on one-piece sections. I have this to say: I have employed on the case, as additional counsel, Gen. Leggett, whose name is almost a household word on every thing concerning patents, and who has been for many years Commissioner of Patents at Washington. After having looked the case all over carefully, he decides there is no possible chance for making our one-piece section an infringement. My advice to those who are thinking of putting in machinery to make one-piece sections is, to go ahead, although, of course, each one must do it on his own responsibility. We are ready for the case, and are anxious to have it come to issue; but I understand it has been postponed. I hope this postponement is not a plan to discourage others from going into the manufacture of these sections.

LABELS FOR 10-LB. HONEY-PAILS.

I PRESUME our friends are aware the Jones labels are not made large enough for any thing above 5 or 6 lb. pails, while a good deal of honey is sold in 10-lb. pails. There are several forms of the 10-lb. pails; 10 lbs. comes so near a gallon that our gallon cans and pails will be about right for it; for, as you know, there is about 11 lbs. of good honey to the gallon. Our printers have gotten up a very pretty label for these gallon pails, which we can furnish for 50 cents per hundred, or $4.00 per thousand; and by a little trimming they will answer for the milk-cans, and the improved Dadant pail, shown in this number. Postage will be 12 cents per hundred. They are printed on different-colored glazed paper, and present a very pretty appearance. Where we sell a customer 10 lbs. of honey, or a gallon, we can afford to make the price a little less than for smaller lots. These labels are exactly right for our 10-cent 4-quart honey-pails. This, you will observe, reduces the cost of the package to only one cent per pound, and the customer has a nice handy pail after the honey is used out. While we get 14 cents per pound for extracted honey, pail and all, for the smaller packages, we sell this one at 13 cents per pound. To make it even change, we sell a 4-quart pail of honey (10 lbs.) for $1.25.

Black and Hybrid Queens For Sale.

I HAVE about 25 colonies of hybrid bees that I intend to kill, if I can't sell them. I have more than I want. Are you buying now? If so, what will you give per pound for them, delivered on cars here? Could they be shipped in large boxes, say six or eight swarms in a box? I want the combs and honey; have only about half a crop of honey this year; think it will bring a good price, as I hear the same report from all quarters. Please answer by return mail, as I wish to do something with them soon. If you do not want the bees, what will you give for the queens, you to furnish cages, as I have none? They are hybrids? J. B. BROGAN.

Oak Hill, Pa., Oct. 1, 1883.

Friend B., we have all the bees we need; but perhaps some of the friends who see this may take them off your hands. I would not think of trying to ship more than one swarm in a box. It is sometimes done, but they go much more safely where the quantity is not over four or five pounds in a package. I would not brimstone the poor little fellows after they have labored for you all the season. Do you think it seems just the fair thing to do, friend B.? We have no demand for hybrid queens.

I have nine swarms of hybrid bees. I kill some of them every year because I can not attend to them. I will sell you as many as you want at 75 cts. per lb., express prepaid. ANSLEY HITZ.

Washington Heights, Cook Co., Ill., Oct. 2, 1883.

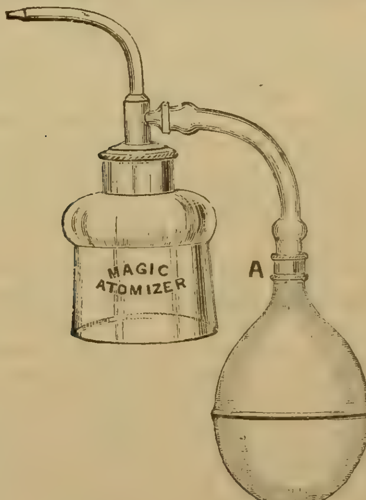
I have a friend who intends to kill about twenty colonies of hybrid and black bees in a week or two. Do you want them? What will you give me to keep them through the winter? I can do it, every one of them, on sugar syrup. To do it, I shall want a *cash* remittance for a little more than enough to buy the sugar; I can also Italianize them all yet this fall. If you want them, an early answer is required.

S. W. MORRISON.

Oxford, Pa., Oct. 1, 1883.

We do not want the bees, friend M., but perhaps some of our readers may want to take them. Your letter suggests the possibility of taking such bees and keeping them through on sugar. I am glad to hear you say you can do it. I am aware that others can do it also, if they will take the necessary pains.

ATOMIZER,
OR
SPRAY-DIFFUSER.



The little instrument shown above is very convenient where bees are to be sprayed, or for any purpose whatever, whether for treatment of foul brood by salicylic acid, or for scenting a colony for introducing queens and uniting stocks. The instrument is very neatly made, the metal work all nicely nickel-plated. Extra valves, and needles for cleaning the tubes, accompany each instrument. It is worked by the rubber ball B. The whole packed in a strong neat box. Price $1.00; by mail, 10 cts. extra.

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WHEN the martyred **President Garfield** lay at death's door for so many weeks, and the whole nation eagerly read every word that came from the sick chamber, the Shorthand Secretary of the President, MR. STANLEY BROWN, was the medium through whom these important messages were given to the public. Only two or three years before that young Brown was working for his father in Washington, as a carpenter with hard hands and sunburnt face, earning a mere pittance the year round. But he had heard of the **Magic power of Phonography,** spent a dollar of his scant pocket money for a Manual of the Art, and during his evenings and rainy days had acquired some proficiency in the use of it. Then he began writing from dictation, in Shorthand, for members of Congress, at fair remuneration. His ability in this kind of work reached the knowledge of Senator Garfield, and he employed all the boy's time as a Shorthand clerk; then when the American people made his employer President, young Brown went with him to the White House as Shorthand Secretary, on a liberal salary.

Other senators are wanting Shorthand clerks, and other Presidents will need Shorthand secretaries; the presidents of railroad companies, insurance companies, manufacturing companies, and the like, are daily calling for Shorthand clerks, and the supply is not equal to the demand. **Boys who have the capacity to see beyond their noses,** should at once procure the latest and best Manual of Phonography, and begin its study, in earnest, as they would the study of law or of medicine. There is not only "money in it," but influence, position, and power. We know of no better work for this study than the **"Eclectic Manual of Phonography,** by Elias Longley, Cincinnati, Ohio. The price is only 75 cts., and it would be cheap at ten times that price, to any boy or girl who will buy it and study its invaluable lessons.

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Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany.....................—
Bee Entomology................—
Blasted Hopes.................587
Editorials.......................581
Forgettery.......................579
Heads of Grain................580
Ladies' Department........578
Remindery.......................588
Smilery..............................—
The Growlery....................—
Honey Column..................562
Notes and Queries...........580

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Apis Dorsata...................571
Banner Apiary.................563
Bees Cannibals................584
Bees, Facts (?) about........581
Bees, Packing..................580
Bees in India...................585
Bees, Uniting...................588
Bees in the South.............568
Bees in a Pound................584
Bees Recognizing the other577
Bees in Trees....................581
Bee-tree, Finding a...........565
Blacks and Italians...........582
Combs to Bottom-bar.......581
Combs and Comb-building..581
Combs, Value of Empty...589
Cyprians in a Drought......582
Dog-fennel......................583
Doolittle..........................573
Drought vs. Bees..............580
Feeder, Bread-pan............576
Feeder, A Good................589
Florida.............................579
Foul Brood and Italians....565
Frames, Metal-cornered....580
Gough's Report................584
Gums, 14 Swarms, etc.......571
Hasty................................574
Hive, The Controllable......585
Hives, Home-made............589
Holy-Lands......................580
Honey, Aster....................572
Honey-dew, Crystallized...570
Honey, To Sell..................576
Honey, Candying..............580
Honey from Banana.........585
Honey, Bitter....................583
Hives and Frames............568
House Apiary..................584
Hunt's Report..................584
Int. to Queenless Colony...583
Invalid's Report, An.........570
Kennedy's Fire................584
Malone's Report..............580
Mississippi......................578
North Carolina................575
Oak-balls.........................589
Peaches............................569
Queen-cells, Cutting........576
Queens, Young, Laying Dr'e Eggs.........................580
Robbers...........................580
Rocky-Mountain Bee-Plant.569
Rose, Macartney..............583
Sections, Closed-top........590
Sections, One-piece......573, 589
Sections, Shrunken..........570
Shepard Swarming-box.....582
Skunks.............................570
Society for Bee-keepers....585
Starters of Drone Fdn......589
Sugar Syrup for Honey.....590
Sumac..............................589
Swarms, Controlling.......576
Swarms on Sunday..........579
Swarm 40 Years old.........585
Swindles, etc...................567
Ventilation, Upward........583
Vermont..........................582
Virgin Queens, Introducing565
Wax-extractor, Solar.......569
What to Feed in November.588
Why do they Leave!........564
Wings, Clipping...............586

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Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

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Select tested queens, young and prolific, - - $3 00
Tested queens, young and prolific, - - - - - 2 50
No more "dollar" on hand this year.

J. S. TADLOCK, Luling, Caldwell Co., Texas.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

NEW YORK.—*Honey.*—In regard to our honey market, allow us to say: The demand for comb honey of all grades and styles is increasing every week, owing, undoubtedly, to the fine quality of goods and style of package. As soon as cold weather sets in, we are expecting a still larger increase. Buckwheat is an entire failure, and we are selling mixed clover and raspberry in place. Fancy white-clover in paper boxes is selling well at 21c; in 2-lb. boxes, at 17@19c; second grades of white in 1-lb. sections, glassed or unglassed, are selling from 17@19c; 2-lb., from 16@17c. The crop is not nearly as large as first estimated, and prices will hold firm at present quotations. Extracted clover and basswood find ready sale at 10c; dark, 8@9c. *Beeswax.*—The demand for beeswax is greater than the supply, and we are holding prime yellow at 30@31c.

Oct. 22, 1883. H. K. & F. B. THURBER & CO.,
Reade & Hudson Sts., N. Y.

NEW YORK.—*Honey.*—There has been no change in prices since we wrote you last, which was Sept. 27th. The market at present in comb honey is very brisk, and we are expecting a very fine season.

Fancy	white-clo'r	honey,	1-lb.	sec's,	no	glass,	20 @21
Fair	"	"	2-lb.	"	"	"	18 @19
Fancy	"	"	2-lb.	"	"	"	17½@18
Fair	"	"	2-lb.	"	"	"	15½@16
Fancy	Buckwheat	"	1-lb.	"	"	"	15 @16
"	"	"	2-lb.	"	"	"	13 @14
Ordinary	"	"	1@2c. per lb. less.				

Extracted white-clover, kegs or small barrels, per lb., 10@11. Extracted buckwheat, kegs or small barrels, per lb., 8½.

Beeswax.— The quotations on beeswax are as follows: Prime yellow, 30@33c.

Oct. 27, 1883. MCCAUL & HILDRETH,
80 Hudson Street, New York.

CLEVELAND.—*Honey.*—Honey continues without change; 1-lb. sections of best white sells readily on arrival at 18@19c; mostly at 18c. When, by some accident, it arrives in bad order, it does not sell very readily. Our experience is, that freight lots, when in full glassed cases, arrive in far better order than by express, because there is more time to handle properly. The 2-lb. unglassed sell at 17@18c; all glassed sections about 2 cts. per lb. less. Extracted, very dull; no inquiry.—*Beeswax*, 28c.

Oct. 22, 1883. A. C. KENDEL,
115 Ontario St., Cleveland, O.

CHICAGO.—*Honey.*—Demand for choice lots of white comb honey is good, and prices are well maintained; 18@20c for 1-lb. frames; 16@18c for 2-lb. frames. Dark honey in combs not wanted. Extracted ranges from 8@10c, according to quality of body and color. *Beeswax.*—Yellow, 33c; medium, 28@30c. R. A. BURNETT,
Oct. 22, 1883. 161 South Water St., Chicago, Ill.

ST. LOUIS.—*Honey.*—Choice in better demand, but unchanged. Sales chiefly in a small way. We quote: Strained and extracted at 6¼@7c; Comb at 12½@16c; choice in fancy packages higher.

Beeswax.—Readily salable at 26@27c for prime.

Oct. 27, 1883. W. T. ANDERSON & CO.,
104 N. Third Street, St. Louis, Mo.

KANSAS CITY.—*Honey.*— Choice comb, 12@13c; in sections, 16@18c. Extracted with fine flavor and good body, 7@8c. Trade on extracted is very dull at this point; market well supplied and demand very light. There is good demand for choice comb.

Oct. 27, 1883. JEROME TWICHELL,
536 Delaware St., Kansas City, Mo.

BOSTON.—*Honey.*—Best 1 and 2 lb. sections, 18@20c. Extracted, 10c per lb.; and as we quote, it will sell quickly in barrels, or half-barrels, or kegs. No wax.

Oct. 22, 1883. BLAKE & RIPLEY,
57 Chatham St., Boston, Mass.

DETROIT.—*Honey.*—A good deal of honey is being sold, though there is no great activity in the market. The price is ranging from 16@17c. *Beeswax* is scarce at 30@32c. A. B. WEED.
Detroit, Mich., Oct. 17, 1883.

I have 400 1-lb. Jones tin cans with white-clover honey in them. Each can is labled with a Jones label; also 200 ½-lb. boxes (Jones style) with small labels. Can send small sample by mail. Who wants it, or can give the most for it? H. M. MOYER.
Hill Church, Berks Co., Pa., Oct. 15, 1883.

I have 1500 lbs. of white-clover and linden, well-ripened, extracted honey for sale at 10 cts. per lb. It is put up in new, well-made tin cans holding 40 lbs. each. The cans are given away with the honey at that price. I have also 500 lbs. of fall honey at 8 cts. per lb., cans included, delivered on board cars here. Small samples sent free. JOHN OLSEN.
Nashotah, Waukesha Co., Wis., Oct. 22, 1883.

I have about 3000 lbs. of white extracted honey, mostly clover, thick and nice, in barrels and half-barrels, for which I will take 10c per lb.; the barrels are oak, waxed, iron-bound, and painted, holding about 360 lbs. each. Delivered at the depot, Union City, Branch Co., Mich. FRANCIS R. JOHNSON.
Oct. 22, 1883.

FOR SALE.—1000 lbs. extracted clover and basswood, in 10-gallon kegs, for 9½ cents, delivered on cars here. M. ISBELL.
Norwich, Chenango Co., N. Y., Oct. 23, 1883.

I have two barrels of honey in alcohol barrels to sell, at 10 cts. per lb., packages thrown in, delivered at nearest railroad station. Barrels are painted and waxed. S. ROESE.
Maiden Rock, Wis., Oct. 20, 1883.

I have 8000 lbs. extracted basswood and white-clover honey; it is in 50-lb. tin cans; will take 10c per lb., delivered on board the cars here.
WM. BARTH.
Petersburg, Mahoning Co., O., Oct. 18, 1883.

Parties having extracted honey for sale, in quantities of 100, 200, and 300 lbs., will please send lowest price, delivered here, including cans, kegs, or barrels. Must be of best quality, and well ripened.
J. G. LEHDE.
Gardenville, Erie Co., N. Y., Oct. 24, 1883.

ADDITIONAL "ADDITIONS" TO COUNTER STORE.

THREE-CENT COUNTER.

3 | JUTE TWINE .... | 28 | 2 50

A great big ball of it, and good fine twine, too.

FIVE-CENT COUNTER.

2 | LAUNDRY WAX..... .... | 40 | 3 50

It gives an elegant, smooth finish to linen, prevents irons from sticking and rusting, saves labor, and preserves the linen. It is also a good substitute for beeswax for waxing thread, and costs far less. Directions for using —Wrap a cake of it in a cloth and pass the iron over it frequently. The iron will then run smoothly and give a beautiful finish at a great saving of labor.

5 | SHELF PAPER .... | 40 | 3 50

One package of one dozen sheets for 5 cents. Each sheet is a yard long and the edge is beautifully ornamented by appropriate machinery. Just the thing in house-cleaning time. We furnish it in several different colors.

FIFTEEN-CENT COUNTER.

18 | JUTE GRAIN-BAGS........................ | 1 40 | 13 00

These are a good strong bag, holding 2 bushels, full measure.

A. I. ROOT, Medina, Ohio.

Cards for Bee-Keepers.

Your name and address printed on a fine quality of bristol, with cut of queen in colors on one corner; 50, 75c; 100, $1.00. Send for specimen book of Honey Labels.

GEO. M. GRAY, Medina, Ohio.

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DEVOTED TO BEES, HONEY, & HOME INTERESTS.

Vol. XI. NOV. 1, 1883. No. 11.

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NOTES FROM THE BANNER APIARY.

No. 48.

A CORRECTION.

IN my report of the bee and honey exhibition at the Michigan State Fair, I gave the amount of Mr. M. H. Hunt's premiums as "over $50.00;" I see, however, by the official report, that they amount to $62.66. I presume that I also erred in calling the exhibition the "largest" ever shown; but at the time of writing I had seen no account of the immense amount of honey on exhibition at Toronto. You think it might be desirable to know

WHAT I HEARD AT THE STATE FAIR.

It certainly would be amusing; but as to the desirability, I am not so sure. For instance, H. D. Cutting had a show-case with a curved glass front, and a tall upper apartment with shelves. This show-case was to hold his exhibition of literature, which had not yet been put in place. A *bee-keeper*, after considerable conversation of a general charcater, asked Mr. C. if he did not find such glass *hives* rather expensive, pointing, as he spoke, to the show-case. Mr. C. replied, "Yes, rather," and then followed a string of questions as to the advantages and disadvantages of such a hive. For a wonder, he didn't ask where was the entrance; if he had, Mr. C. said he should have told him that he opened the door when the bees wished to pass out or in.

One evening, just about sunset, I had carried out my own bees, and was giving them a "fly," when one of them alighted upon the ear of a gentleman standing near. For a wonder, the bee remained undisturbed, and would probably have flown away unnoticed, had not a boy in the crowd shouted, "Say, mister, there's a bee on your ear; why don't you brush him off?" Quick as wink another boy replied, "Oh! I'll tell you, Jim, that bee is after *wax*." I don't think there was any thing that I heard during the fair that *tickled* me quite so much as this speech.

And then a great many visitors, especially ladies, would exclaim, upon seeing the bees in the observatory-hives, "Oh! here are some bees. Oh, my! how busy they are! I wonder what they are doing. Are they making honey?" This last remark would be addressed to me, and once again I would patiently go through the oft-repeated explanation, and then the visitor would pass on with a satisfied "Oh! that's it."

It is sometimes amusing to see how differently the public will sometimes "take" things from what one expects them to. For instance, quite a number were in doubt as to whether the honey in my case, labeled "Gilt Edge" honey, was *genuine* bees' honey, or whether it was some manufactured stuff. That newspaper story, about manufactured honey, that went the rounds two years ago, had so prepared their minds that, when they saw the smooth white sections filled with snowy combs that were as true as so many blocks, and read the inscription upon the case, it is not to be wondered at that I was frequently called upon to "explain."

But there is one thing that the people *are* learning, and that is the difference between strained and extracted honey. I heard a large number of people say "Extracted honey." I took one reporter "to do," because he called extracted honey *strained* honey in one of his reports, and that, too, after I had explained to him the difference. He excused himself upon the ground that the public would not know what he meant if he called it *extracted* honey. I replied, "Well, then, *educate* it. What are newspapers for, if not to enlighten the people?" He laughed, and said, "That's *so*," as he went away, and there was no *strained* honey in his report the next day, but there *was* "extracted" honey. I tell you, that fairs *are* great educators.

One day I heard some one say, "Hutchinson;" and looking up to the other end of my exhibit I saw the smiling faces of Mr. and Mrs. J. H. Robertson, of Pewamo, Mich. We had a nice little chat. Mr. R. sold most of his bees last spring, and has been "building up" the past season. He has about decided to give up other business, and devote his whole time to bees, which is, in my opinion, a wise decision. The time when *everybody* should keep a dozen swarms of bees has passed away, and the time when the bee business can be *profitably* mixed up with other business is *now* passing away, and beekeeping is becoming a *profession*. The specialist can do more work, do it more cheaply, and better, than the man who divides his capital, his time, and his talents among several pursuits.

"Hello, hello!" some one said; and upon looking up, there was Prof. Cook's smiling face, and close behind it that of Mr. R. L. Taylor. They were on their way home from Toronto, and were "chock full"— of enthusiasm, and there is "no use trying" to repeat what was said.

Since attending the State Fair I have made an exhibit

AT OUR COUNTY FAIR,

where I and my brother received $16.50 of the $24.00 that were offered as premiums, which just about paid our expenses. With the exception of a premium on a comb-foundation machine, which was awarded to Mr. J. L. Wilcox, the remainder of the premiums were awarded to Mr. M. S. West. At our county fair we sold our entire crop of comb honey to Mr. West. Perhaps I should not say our *entire* crop, as about 500 lbs. were sold at the State Fair, and a few cases had been sold at stores near home.

THE ALLEY, HUTCHINSON, POND CRITICISMS.

Had I condemned, in any particular, the Alley method of queen-rearing without giving *reasons*, the remarks of Bro. Pond, on page 66 of the JUVENILE, would have been *right to the point;* but, how is it now? Can friend Alley or Pond or *any one else* take up my review of friend Alley's book, take it up point by point, and meet reason with reason, argument with argument, and fact with fact? If he can, and *does*, you have but little idea, Bro. Pond, how gracefully will I yield the palm. Since writing my review I *have* given the Alley plan a thorough trial, and I can only repeat what I have already said, and repeat it with vehemence.

Please remember that I have not *condemned* the Alley method, for I think — in fact, I *know* — that good queens can be reared according to that plan; but I *do* say, that it is complicated, and any man who has the free use of his reasoning powers will say the same after a thoughtful perusal of the work.

Yes, it *is* true that I have had only four or five years' experience in the queen business; and it is equally true, that in nine cases out of ten, when a young man labors with an old veteran, and tries to point out his errors, and teach him better methods, be the parties lawyers, doctors, farmers, or what not, a look of astonishment will steal over the face of the old veteran, and he will exclaim, "Why, young man, I have been in the business *twenty* years!" when, perhaps, the last year's experience may be a counterpart of the first. "Oh! you have had no experience, young man," is *not* a very "lofty" argument with which to meet solid facts.

CAUTION.

I sincerely thank you, friend Root, for your advice in regard to not being hasty in taking up new departures, and I will try to profit by it; but the "conclusions" that I mentioned last month were not hasty; they had been "lingering in my mind" (if that is the proper expression) for the past year or more, and at last I was forced to adopt them. There is another "conclusion" that has been "lingering" for a long time, and that is, that

SUGAR STORES ARE SAFEST FOR WINTER.

So nearly have I come to this conclusion, so certain do I feel that pure cane sugar is the key that will unlock this wintering problem, that I am feeding two barrels of it to 85 colonies. From some of them, *all* of the honey is extracted, and 20 lbs. of sugar fed; from others, no honey is extracted, but they are fed from 5 to 15 lbs. of sugar, just according as they are heavy or light with natural stores. This sugar will *probably* be the first to be consumed; will be used during the winter, and the honey that occupies the upper part and corners of the combs will remain untouched until spring comes, and the danger from dysentery is over; at least, this is how I *theorize*. Some colonies are left undisturbed with natural stores, and some are *fed* honey.

W. Z. HUTCHINSON.

Rogersville, Gen. Co., Mich., Oct., 1883.

* * *

SOMETHING MORE ABOUT SWARMING.

WHY DO THEY LEAVE?

I NOTICE in GLEANINGS for Sept. a letter from Anna Stanclift, giving an experience with new swarms of bees. As I have had some of the same kind of trouble, I will report as requested.

I had a very large swarm leave the hive after it had been seemingly working contentedly two days. It had brood in all stages, given the day the swarm was hived; we found them clustered on a tree near the hive they had left. We knew them by the queen. They were hived again in a different hive—a box hive without brood or comb of any kind, where they remained. There was no advantage in the location of the second hive, so it was strange to me they left the first one, and yet they stayed in the last.

Again, I had a swarm leave a hive after remaining several hours. The hive stood in a cool shady spot, but near where the swarm had clustered. Did returning scouts lead them away? My neighbors laugh at that idea, but the bees left for parts unknown.

About ten days ago, late in the afternoon, we found a fine swarm of bees clustered on a tree; hived it; carried the hive 30 feet away; fed them that night, and they seemed all right at noon next day; but during the afternoon, away they went. The day was cool, and partly cloudy. The hive was clean, and set in a clear open space near a fence. Why they left, is another bee-puzzle. It was not the heat, I am sure; neither was it robbers, as I watched them closely during the forenoon. My bees are Italians, part of them raised from your stock of queens, the rest from J. W. Keeran, of Bloomington, Ill.; and I want to say here, he is a prompt, honest man to deal with. I have ordered a number of queens of him (all untested), and they proved to be purely mated, producing large, gentle, three-banded bees; queens very prolific, and bees good workers. All my queens are laying, keeping the combs filled, although there is very little honey coming in. They have not gained 3 lbs. to a colony in 4 weeks. Goldenrod and other fall flowers are abundant, but bees do not work on them. It is, and has been for several weeks, very dry. The spring or summer yield of honey was heavy. Honey is slow sale at 12½ cts. per lb. I think it will bring a better price, unless the bees do better than at present. GLEANINGS is a most welcome guest. D. C. AYARS.

Moawequa, Shelby Co., Ill., Sept. 5, 1883.

INTRODUCING VIRGIN QUEENS.

FOUL BROOD AND ITALIANS.

As several of the friends have given their experience in introducing virgin queens, I will give mine. If I have one or more virgin queens to introduce, I proceeded as follows: I go to the parent hive and take out all the combs that have these virgin queens on them, and stand the combs outside the hive (remember, this can be done only in a flow of honey, when there are no robbers about). I then go to as many queenless hives as I have virgin queens, if I have that many, and I smoke each colony well; then I take out of each of the queenless colonies a sheet of brood with the adhering bees, and I stand that outside of its respective hive (leaving the hive open), and so I go to the whole number, as many as I have virgin queens I wish to introduce. I now go to the first queenless hive, where I left the comb standing outside; pick up the comb, and go to where I left the virgin queens on the combs outside their own hive. I pick off one of these queens, and place her on the comb I have brought with me from hive No. 1 that was queenless. I watch the bees and the queen for a few moments, to see that all is well; but as a rule, the bees pay little or no attention at all to her. I take the comb with the queen, bees, and all, back to hive where they belong; set it quietly in its place in the hive; close all up, and wait patiently the result. I do not disturb them till it is time for the queen to begin laying. In the same way I proceed with all the hives spoken of above.

Now, I have been very successful in the way of introducing virgin queens; and the way I look at it is this: The trouble in introducing virgin queens to a queenless colony is, first, she is rushed into the midst of a strange lot of bees; and she, not being a fertile queen, they naturally take a dislike to a queen that is not prepared at once to go on and fill the proper duties assigned or expected of a queen, and, in most cases, they think it best to dispose of her and take their chances on getting something better. Well, now for my reasons for proceeding as stated above: As all old bee-men know, after you have had the hive open a few moments (if there are no robbers around), the bees fill themselves with honey, and become quiet. They get used to the light and to your presence, and generally they assume a kind of a "don't care" disposition, and are ready to accept almost any terms (only so they have peace). Well, now, after you have been to all these hives, and set a sheet of brood out of each, by the time you get around with the newly hatched queen they that are on the comb, and those that are in the hive are all in the best nature, and, as a rule, all goes well. But, now, understand, it is not always sure. The bees either kill some of them, or they get lost on their wedding-tour. But as I said before, I have had better luck introducing virgin queens this way than any other I ever tried.

On page 537, Milton Hewitt speaks of a disease of bees, and wishes to know if Italians are affected with foul brood the same as the blacks. Now, friend Root, my experience is not at all like yours. After an experience of six years in California, where foul brood is the regular diet, morning, noon, and night, in the winter and in the summer, I saw but one pure Italian stand of bees that had foul brood, and this was a lazy, good-for-nothing queen; and in the spring of 1880 her colony had foul brood. But, blacks; whew! I have seen too many. Now, I do not say that Italians will not have foul brood; but I do say, I never saw more than one stand have it, while I have seen hundreds of blacks "go where the woodbine twineth," with that most of all dread disease, *foul brood.*

In some future number of GLEANINGS I will give my remedy for foul brood, and what I use to keep the disease off when in a locality where it prevails.

Water Valley, N. Y. A. W. OSBURN.

Friend O., I should advise letting young virgin queens loose at the entrance of the hive, or, if you choose, by turning up the mat over the combs. It is true, some of them will "come up missing;" yet if they are well watched, the number is so few that we have decided to take the chances. If they have been hatched several days, and are running about on the combs, I would just swap combs; and if honey is coming in, there probably won't be any fuss "in the camp." Your plan may be safest, after all, and I have given it because it embodies very important points in handling bees. *When one has become sufficiently acquainted with the habits of bees, to know just what he can do with impunity, he pretty soon begins to find he can do almost any thing he wants to do.* — I am very glad to hear you pay the Italians the tribute you do, in regard to foul brood. It has always seemed to me that their energy would enable them to shake off disease, and also in the same way throw out moth millers and robbers; but I have never heard the idea advanced before, that I know of.

PRACTICAL RESULTS.

FINDING A BEE-TREE.

While passing through the woods some half-mile from my apiary early one morning, just about sun-up, all of a sudden I heard the industrious hum of bees; and upon looking I found that they were sucking at the root of a large white-oak. On account of disease, the sap of the tree had fermented, and was slowly running out; and 'twas this that attracted the bees — or, at least, that was my supposition. It might, however, have been that the bees, like a great many of the fraternity, had become attached to the word "Root," and were working there on that account. To my surprise, they were all black bees. This being a fact, I knew they must be "wild bees," so I determined to give them chase. I went home and procured some honey, mixed with water, so that it seemed almost of the consistency of water, and in this way I thought to have them load and unload quickly. I also procured some flour and three small pieces of boards, six or eight inches square. First I put some flour on the backs of a few bees, and found that they returned in from 10 to 15 minutes. I then placed the boards at three different places; poured what honey would lie on them, and then filled my hands, and rubbed it upon the bushes and underbrush near. As there was but little honey to be had from flowers at that time, the whole woods was soon alive with bees. They just fairly covered the little boards. It took about 15 minutes for them to get their courses, and as they all seemed to go toward one point, I soon found them about three hundred yards from the place where I first found them, and from where I had timed them.

One strange feature I wish to note here is, that after I had gotten them to work at the honey I noticed more three-banded bees than blacks; and upon cutting the tree I was surprised to find that about one-third were black, and the rest pretty fair three-banded ones. This was the exact characteristic of the progeny of a "dollar" queen I had sold to a friend about four miles away; and upon inquiry I found that this same queen had led her swarm astray in the direction of where I lived.

Greeneville, Tenn. CHAS. KINGSLEY.

Friend K., you have have given us at least one valuable fact in the above. That is, to sprinkle honey around on the bushes and underbrush when you want to get wild bees working strong on the bait. Although I have never tried it, I know this would "just do it."

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CHICKENS THAT WON'T EAT BEES.

CHEAP MEAT FOR BEE-KEEPERS, ETC.

I HAVE read with some interest in the past, reports of chickens in the apiary, and complaints of their eating bees. Now, I have found a kind of chicken that will never eat bees. I have been very much annoyed by the grass and weeds growing in my apiary, and some time ago I built a close picket fence around it, and turned in this peculiar kind of fowl I speak of, and am well pleased with the result. The chaps are an English breed, generally gray in color, have large round eyes, four feet instead of two, and when they walk they *jump;* have ears from 4 to 5 inches long; and when given their own way, they roost in "holes in the ground." They are very prolific, increasing from two to 25 or 40 in a year; and when brought upon the table in the shape of a pie, potpie or roast, are fit to set before a king. They will dress from 3 to 5 lbs.; flesh, light, tender, and sweet. Mrs. F. says she prefers them to any kind of chicken raised.

But the great thing in their favor is the trifling cost of keeping them, as it is about impossible to find any thing that grows out of the ground that they will not eat; every kind of weed and vegetable, both root and top, they eat with a keen relish, so the cost of keeping them sums up about 00.

Since putting them in the apiary I have not been troubled with any more grass or weeds, and they do not keep the ground as filthy as do the dunghill fowls, and they and the bees get along well together.

A. A. FRADENBURG.

Port Washington, O., Oct. 29, 1883.

Friend F., no doubt your long-eared chickens (?) would keep the weeds cleared away around the house nicely; but as they don't lay eggs, we shall have to be under the necessity of chopping the heads off the poor innocent-eyed fellows whenever we want to get that cheap meat you speak about. I presume it is all right; but some way I can never get used to killing them, unless they are doing damage somewhere.

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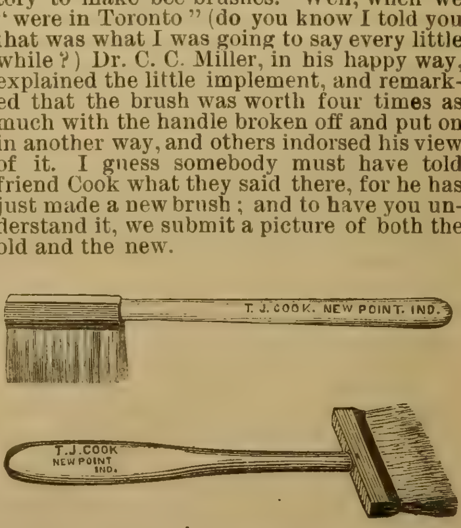
BRUSHING BEES OFF THE COMBS.

T. J. COOK'S IMPROVED BRUSH.

UNTIL within a very short time, bee-keepers did not seem to be aware of the necessity of having a brush especially intended for this purpose, for it was supposed that a bunch of asparagus, some clover-heads, or any leafy branch, was good enough for the purpose. When the California brushes were introduced, I was a little surprised to see with what eagerness they were called for, and more than a thousand were sold last year, before I knew it. Then when our friend T. J. Cook suggested a brush made especially for the purpose, we, in our want of faith and ability to appreciate the situation of things, thought perhaps he might sell a few dozen. But to my surprise, in a little while the trade sprung up so it seemed he would have to have a little factory to make bee-brushes. Well, when we "were in Toronto" (do you know I told you that was what I was going to say every little while?) Dr. C. C. Miller, in his happy way, explained the little implement, and remarked that the brush was worth four times as much with the handle broken off and put on in another way, and others indorsed his view of it. I guess somebody must have told friend Cook what they said there, for he has just made a new brush; and to have you understand it, we submit a picture of both the old and the new.



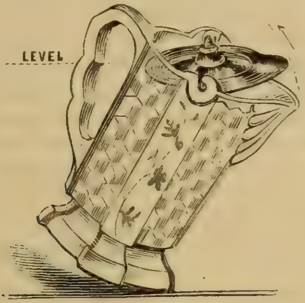
COOK'S BEE-BRUSH.

I believe the price is to be the same as it has been heretofore, and you can order them of us or of friend Cook, as you choose. At the same time, we can tender friend Cook a vote of thanks for having anticipated the need of such an implement, and we hope he will keep it always up with the times, and have the brushes ready to ship.

HONEY CUPS OR PITCHERS.

WHAT SHALL WE USE FOR HONEY ON THE TABLE?

I PRESUME the friends are well aware of the many utensils that have been recommended for the dining-table, to hold honey. The most obvious thing that presented itself at first was a syrup-cup; but honey is usually thicker than syrup, and it also candies, but syrup does not. On this account, syrup-cups are not always convenient. We have tried them in our lunch-room, and at first thought the patent drip was going to be just the thing; but the top was so small that the honey, when thick, would not run out. Then after a while it got candied. The women folks then set them in hot water to melt it out; and as the cup was glass, it soon cracked. The cut we show you below has the following advantages:



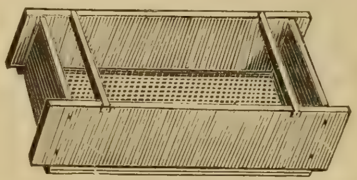
OUR NEW 25-CENT HONEY-PITCHER.

It is always secure against flies, because the simple act of setting it on the table closes the cover; and who likes to see a fly struggling about in his honey? I am sure I do not. It is true, you can take a fork or a spoon, and after some bother fish him out. But the next question is, where to put him. If you put him down he will crawl around and leave a sticky streak wherever he goes. If you kill him so he can not crawl, you have got a double piece of nastiness somewhere, and so about the only way is to carry him outdoors. Well, this cup is always closed against flies, as I have told you; and besides that, if the honey gets candied you can just take the lid right off, and then you have a large opening to take out the honey as you would take out a piece of butter. In fact, this honey-dish would do very well for a butter-dish, if you had not any other. Besides the other qualifications, it is very handsome, as I think you must admit. And then, again, the price is only 25 cts.; and if you want ten of them, you can have them for 20 cts. each, or a whole hundred for $16.50. When you have not got any honey, you can use it for a cream-pitcher; and, in fact, that is what it was originally made for, and the name given to it was "Magic Creamer." I forgot to say, that the tilting lid is made of britannia, and when they are bright and new, the lids are as pretty as if they were silver-plated. When they get old and tarnished, you ought to be able to get a new lid for about 10 cts.; so it won't cost much to have a nice honey-cup always. I like nice new things; don't you?

AN UNCAPPING-BOX MADE OF WOOD.

A SUBSTITUTE FOR DADANT'S UNCAPPING CAN.

SOME little time ago some kind friend sent us a description of the implement shown below; but the engraver was a great while in making a picture, and so the letter was lost. We have decided to give the picture, and the friend who sent it may send us a description next month.



A BOX FOR UNCAPPING.

As the bottom of the box is made of wire cloth, we presume the machine is to be set over a can or tub, to catch the honey that drips, or may be a tin dripping-pan, if watched and emptied before it runs over. The box explains itself so well by the picture, that I presume but little description will be needed. The cross-bars are evidently intended for resting the combs on while the caps are being sliced off. Now, friend Whatsyourname, will you be so kind as to excuse us for losing your letter, and at the same time accept our thanks for telling us how to make an uncapping-box?

* * *

ARE THEY SWINDLES?

RECIPES FOR PRESERVING EGGS, ETC.

AS a copy of the *Bee and Poultry Magazine* is before me, I now know why the *Bee-Keepers' Exchange* does not make its appearance any more. It seems as though the *Exchange* had got into a whirlpool, and was engulfed in the *Bee and Poultry Magazine;* and in order to smoothe up things the *Poultry Magazine* offers to fill out the unexpired time of the subscribers to the *Exchange*, with the *Magazine;* but those who have sent money for "ads." and books will have to lose all, as I have found out. As the August number of the *Exchange* did not appear, and I did not receive the goods I sent for, I wrote a card to know what was the difficulty, to which I received an answer as follows: "The magazine will not be out on time, owing to the breakage of large press in our office; will look the books up. Theo. P. Peet, Ed."

I will also state right here, that the egg-keeping compositions, or preservatives, are all humbugs. There is nothing on earth that will keep eggs so that you can not tell them from fresh ones. You can easily tell the difference between an old or pickled egg, and a fresh one, by placing one of each in water. The pickled egg will always float higher than the fresh one. The recipe will tell you that, if the directions are carefully and particularly followed, *fresh* eggs will keep from spring to winter. Do you see the point? There are always some innocent ones who get caught when such an "ad." goes its rounds through the papers. Any person desiring such a recipe for preserving eggs can get one by paying 10 cents for a specimen copy of the *Farmers' Magazine*, that contains several of them that are selling at five and ten dollars apiece.

J. F. FLETCHER.

West Monterey, Pa., Oct. 24, 1883.

Gently, friend F. You are certainly right, however, in suggesting that it is time some explanations were made in regard to the unsettled accounts of the *Exchange*. Perhaps our good friend Peet can give us some light on the subject. It seems to me, also, that our old friend Nellis, even if he has sold out, might assist in having justice done to his old friends and patrons. Letters have come to us for some time back, saying that Mr. Nellis seemed to be in some way connected with the *Exchange* and its business, even long after he sold out; and those who went there to see about their accounts, after he sold out, say they found him there, apparently directing affairs. It strikes me, that if I were in his place I would at least make a suggestion, especially as the accounts all together do not amount to a very large sum, if I am correctly informed.—In regard to the preserving compound, I have been pretty severely cudgeled already for refusing to publish an advertisement of the secret. In times past I have several times invested considerable sums of money in secrets and recipes, and I have never yet received one that was not already in public print, either in recipe-books, or in class journals belonging to that particular industry.

BEES IN THE SOUTH.

A TRIP TO LOUISIANA.

NEVER before, Mr. Root, did I realize the true spirit of your talk about tobacco while traveling on the cars. Oct. 10th I boarded the cars at Greeneville for Louisiana. Every thing was fresh and clean — no sign of the use of tobacco. At first I wondered how it was that you had found so much fault with the traveling public for using this *poisonous* weed; for I traveled all day without seeing any one using tobacco. However, at night I changed cars at Chattanooga, and I found, when I entered the car, that it was almost full of emigrants, bound for Arkansas and Texas. Well, the whole of it is, the air was just suffocating on account of tobacco smoke and the smell of liquors. But, people who go west are people who are dissatisfied; and people who are dissatisfied are, as a rule, to blame for their own dissatisfaction, as they don't conduct themselves in life so as to bring upon themselves happiness. I have come to the conclusion, that, as a rule, the use of tobacco is confined to the lower class of people; and it is certain, that no one can fight too hard against its use. How can man keep clear the mental faculties (the greatest earthly possession) that God hath given him, with his whole system filled up with the filthy and poisonous juices of this "master of man" and brother and partner of Satan? Ah! got the juice of Satan in him. Mr. Root, you and all who are engaged in this fight are doing a noble work, and richly deserve God's blessing.

A VISIT TO AMOS ABRAMS.

Friday evening brought me to the house of our good friend Capt. Abrams. I was truly glad to meet with him, as some considerable dealing had already made us good friends. Mr. Abrams is quite a little (?) man. I believe he said he weighed only 243 lbs. However, notwithstanding his "dwarfy" size he is a whole-souled man. His bees number about 225 colonies; and from the indications I get, they have been doing him good service. I suppose, from what he says, that he has already taken 6000 lbs. of extracted honey, and most of the hives are chock full of honey, some of them having at least 200 lbs. From what I can glean, the Red-River Valley is a No. 1 locality for the bee business.

ABOUT HIVES AND FRAMES (SWINGS).

For the first time in my life I had the opportunity of working with the Root make of hive. I must say that the work is good, but the frames are not heavy enough. A great many of them fall to pieces before they will come out, and all of them sag down in the middle, both top and bottom bar, when full of honey. The most satisfactory frame I ever had was some I made of pieces ½ inch thick. They never gave way. I think at least the top-bar ought never to be under ½ inch thick. Now, I have some of Langstroth's frames made fifteen years ago; they are much heavier than the Root frame; and in addition to that, they have a block in each corner. They have been used a great deal, but are as good as ever.

AN IMPROVEMENT ON THE CLARK SMOKER.

My experience is, that the greatest objection with the Clark smoker is its getting so badly stopped up, and the difficulty of getting it unstopped. Why could not a block be put on the under side of the bellows, just opposite the crooked spout, and through this have a hole so we could clean the crooked spout? The block would make the wood thick enough to screw a stopper in so there would be no trouble about the air getting out. I think, too, that it needs some kind of shield, as I have more than once burned myself pretty severely. Perhaps you may say 'twas carelessness. Perhaps so; but I dislike to have to spend time being careful about a thing that can be remedied otherwise.

CHAS. KINGSLEY.

Greeneville, Tenn.

Friend K., it is cheerful to think we agree so nicely on tobacco, even if we do not on frames. I wonder if it is not getting to be a fashion to be a little vehement when criticising your editor of late. We sell frames by the carload, but I confess it is almost a new thing to be told they are not heavy enough; and in regard to pulling them to pieces, you surely do not mean to say you pulled metal-cornered frames to pieces, in taking them out of the hive. Our all-wood frames, when put together and nailed, ought not to pull apart either; but I have heard of friends who just pushed them together with their hands, and never thought of nailing. But it does not seem to me that our friend Abrams would do such a trick as that. In regard to the sagging, you seem to overlook the fact that the greater part of our frames are now wired; and with the diagonal wires, sagging is next to an impossibility.—Thanks for the suggestion in regard to making the Clark smoker easier to clean. I do not know how we could keep it from burning the fingers, without adding to the expense. Fifty cents is a pretty close price. Perhaps a shield might be added, so as to let those use it who care to. We shall see.

A STORY ABOUT PEACHES.

FRIEND FRADENBURG'S ENTERPRISE.

HERE is a little buzz, but not from bees. About the middle of last month I made preparations for, and thought I would evaporate a few peaches; and in order to do so I found I had to have help to prepare them for the evaporator; that is, to split them open and lay them on racks or frames. To do this I gave out word that all who would might come, and they did come. Several women and young ladies, and the school-children; any one who was large enough to cut a peach open and take out the pit, could earn a few cents every evening; and as I paid by the piece, they could work as long and as fast as they wished. But right on the start, trouble began, and it was where to find room for so many little juvenile workers. As I had no building or shop suitable, up came the parlor and dining-room carpets, and every nook and corner turned into a work-shop, which made my house resemble a bee-hive in clover time. Each one seemed to vie with the other to see who could make the most. Many of them earned the first pennies in their lives; and as the days rolled along, the peaches kept rolling in, until my work-shop and yard had piles and piles of the fruit, waiting to be dried. Every barrel, box, and basket, fairly groaned with peaches; it was peaches, peaches, peaches, everywhere. I often thought of you, with your rush of business. I was up day and night, scarcely getting more than 2 or 3 hours' rest in the 24; and as a result, I find I have about 3 wagon-loads of peach-pits, worth as much as so much coal for fuel, and 5000 lbs. of first-class evaporated unpeared, and 1000 lbs. of pared peaches, the product of over 600 bushels of the green fruit. A. A. FRADENBURG.

Port Washington, O., Oct. 17, 1883.

Friend F., I am always interested in any industry that furnishes work for women and children. I am glad to know that you had such a crop of peaches. Very likely some of our readers can use the peach-pits you mention, and may be your evaporated fruit also. While I think of it, I wish you would send us samples of the latter. Now just go on, friend F.; study up some other industry to keep the idle ones out of mischief, and God will bless you in so doing, provided you do it all for his honor and his glory.

THE SOLAR WAX-EXTRACTOR, AND SOME OTHER MATTERS.

SOME FACTS FROM THE NEIGHBORHOOD OF FRIEND AUGUSTUS CHRISTIE.

IN reading Sept. GLEANINGS I was much interested in friend O. O. Poppleton's solar wax-extractor, and I thought it would be well to give you a description of the one we use here. Make a square vessel of galvanized iron about 30 in. square and 20 in. deep. At about 5 in. from the top, put in cross-bars of 3-16x⅝ iron, edgewise; fasten by means of rivets through the sides of the vessel. This vessel, or iron box, should flare so as to let the wax rise easily; the bars should be about 7 or 8 inches apart. Fit a perforated zinc sheet inside of the vessel, resting on the iron bars, to support the combs or cappings to be melted. At the top fit on a frame outside of the iron box, and let one side rise about 3 or 4 inches, to shed rain. Nail tightly the top of the iron vessel to the inside of the bottom of this frame, and cover all with glass, having no cross-bars to obstruct rain or form shadows. Fit the sash tightly, that no heated air may escape and thereby prolong the melting process.

TO OPERATE.

Remove the cover and throw in cappings or comb; and if the cappings are to be melted, the honey will keep the wax from sticking to the vessel; but if combs are to be melted, it will require a little water in the bottom; and when melted, fill again, and so on. This, as friend P. says, works admirably, if the weather is suitable; but the summer has been cool here — at least the latter part and fall. You will notice this has one advantage, at least, and that is, that the sheet containing the matter to be rendered shades the melted wax, and thus prevents the hardening of which friend P. speaks. I have made some improvements recently, so that the wax-holder can be placed in a warm place where the sun will best strike it, and handles may be put on the sides so it can be carried from the honey-house to any desired place at any time of day, thus avoiding the trouble of bees in handling exposed cappings.

But now let me tell you of another — the "Boss," as we call it, for we think it the best ever used, so far as we have read and have seen used. I made and operated it this season for my brother-in-law, Mr. Aug. Christie, of this place, by whom I am employed; and at the request of friends W. S. Van Meter and E. S. Foulks I submit it to you, hoping it may be of use to you and our bee-loving friends. Inclosed find diagram roughly sketched; but perhaps it will give you an idea of its form and attachments. I will send you a small cake of wax, a sample of its work; we have about 500 lbs. of such wax, and more to extract.

ROCKY-MOUNTAIN BEE-PLANT.

In this section there is considerable Rocky-Mountain bee-plant, brought here from Colorado by one O. B. Smith many years ago, and it yields abundantly. The honey is light, and has no unpleasant flavor, although a little different from others. One year ago last August there was a patch of it growing at the corner of the house, and we spent many a half-hour pleasantly, watching and timing the little pets as they licked the drops of nectar that exuded from the under side of each tiny flower, and in many instances three of them would make a load for a bee, and away he would go to the apiary; the exact time that it took the bee to load, I have forgotten, but I think from 1 to 1½ minutes. The nectar began to flow at about 4 P.M.; and as we were watching and noticing how anxious the little fellows were to get their loads, some would cling to the flowers, benumbed all night, until the morning sun would limber them up, and then away they would go, and carry with their load the news of the abundant field of harvest. The idea occurred to me, could we not sow 10 or 15 acres of this plant about our apiary, and put an electric light in the center, and thus get our bees to work day and night, and thereby save that which must go to waste during the night.

But, let us talk of that which is practicable. It occurred to me that the above plan would require a fire, also, in the latter part of Sept., to warm by. Mr. Christie intends to cultivate a large field of it next year, and I believe it will amply pay any one to do so. I have about 40 lbs., some of which I intend to sow, and the remainder I will sell to those wanting it, at $1.00 per lb. To cultivate, it should be sown on rich mellow ground in fall, that the seed may freeze, and I should sow in rows, and cultivate in spring, to keep the weeds down and give it a good start, and the ground will seed itself after that. It is not an obnoxious plant, as it is easily destroyed.

SKUNKS EATING BEES; SEE PAGE 608.

Is it a common thing for skunks to eat bees? Yes, friend Bull, it is. In two of Mr. Christie's apiaries we have been greatly annoyed by them, and another, I remember, not far from here.

F. E. BULLIS.

Smithland, Iowa, Oct. 10, 1883.

Thank you, friend B., for the many facts you have given us. I would suggest, in regard to the solar wax-extractor, that it be located in some point protected from prevailing winds, although admitting the sun freely. An enormous heat may be obtained by preventing the hot air from escaping, and accumulating, as it were, the rays of the sun. I have often wondered why the heat of the sun is not utilized to save fuel in warming houses. I am sure there is a great field open for discovery. By means of mirrors, or even bright sheets of tin, the rays of the sun may be concentrated on a single point so as to give almost any desired temperature. I once collected all the looking-glasses I could find in the house, and fixed them so that they cast their reflection on one single spot, and I tell you it very soon began to make things smoke. For melting wax we do not need a very hot temperature. — I would explain to our readers, that the Boss wax-extractor described by friend B. is substantially the arrangement we now have in use, to be worked by steam; namely, a wire basket hung on a large barrel or cask, with a jet of steam playing on the under side of the basket. Where one has steam, this is doubtless ahead of all other methods. — It seems to be now well proven that skunks do devour bees, and therefore it will behoove our friends to look sharp whenever they notice the characteristic scent in their apiaries of a morning.

THE CRYSTALLIZED HONEY - DEW OF OREGON.

FRIEND BROOKS REPLIES TO THE QUESTIONS I HAVE PROPOUNDED ON PAGE 541.

NOW for questions about the crystallized honey-dew. 1. The number of trees exuding this sweet can not well be estimated. Our forests here are evergreen, and the fir is the principal timber. In the vicinity where I gathered the sample sent you, I should say there would be a hundred trees to the acre. It is in spots, or on occasional limbs on the tree; and it also is in spots as to locality. This belt of country is situated in the foot-hills of the Cascade Mountains; and how far it may extend along this range, I could not say, but I suppose for many miles.

2. The reason I do not locate my bees in the midst of this fountain of sweet, is, that the bees that are there do not seem to make any more honey, nor nearly as much, as where mine are located now; besides, I am only a little to one side of the midst now. As singular as it may seem, I did not see a single bee gathering the sweet from those trees, though others claim to have seen them at work briskly, where flowers were scarce. From watching my bees, I conclude that they don't work on it when honey-dew of any kind—liquid or crystallized—is abundant, for the flowers are then rich too.

3. This honey-dew, in its more liquid state, is quite common in portions of the State; that is, every good honey year, or, say, 4 out of 5 years. It makes its appearance in dry seasons about the middle of June, and lasts about two months. Rains wash it all away. The first that came under my observation was in the summer of 1881; following years, 1882 and 1883. So I think it is not unusual. I saw it crystallized on the fir only, except as it dripped to the plants beneath, and hardened there.

A SUGGESTION IN REGARD TO USING SECTIONS THAT HAVE SHRUNK.

Friend J. N. Scranton (Sept. JUVENILE, page 581), why, that's just the "racket." Get the seven frames all shrunk so that there is one inch space left after they are all in, and just drop in a ½-inch division-board, and key up to that; that will give you lots of room to take out the first frame of honey, and the key to the rest. All of mine are so.

Silverton, Oregon. E. S. BROOKS.

AN INVALID'S REPORT.

616 LBS. OF HONEY FROM A SINGLE COLONY.

I HAVE been a subscriber to GLEANINGS for five years, and I think I owe it to the magazine, and its editor, to let them know how much benefit bee culture has been to me.

I have been an invalid for the past seven years, and have had to lie down the greater part of each day all this time. I have been able to read only a very little, but always have every article in GLEANINGS read to me.

In the spring of 1878, my uncle gave me two colonies of black bees in box hives, and they have increased steadily, until now my brothers and I have 43 colonies, all in Simplicity hives. I have taken almost all the care of them until this summer, although I have had some help in the busy seasons. Last spring the apiary numbered 21 hives; and, not feeling able to have the care of so many, I divided them. I took charge of 6 hives, and my brother the remainder. The first three seasons they were in box hives; since then we have been Italianizing them, and transferring into Simplicity hives. We have never purchased any supplies for the apiary until the bees had first earned the money to pay for them. I do not know how I could have got along all these years without the bees and GLEANINGS to interest me; they have occupied most of my time and thoughts in the summer time, and also, to some extent, in the winter. I have had many a discouraged hour with the bees, and many a time have been tired out working with them; but on the whole they have been a great pleasure to me, and, I think, a benefit to my health. I have never seen any of the modern improvements in bee culture, except our own. I was first led to subscribe for GLEANINGS by the advertisement in the *American Agriculturist.*

I have given my report from time to time, and now will give this season's report. I began this spring with six colonies, as I have said; most of them were in fair condition, but two were very weak; one of these was devoted to queen-rearing part of the summer. They have increased to eleven good colonies, and have made 1500 lbs. of extracted honey, 630 lbs. clover, 425 lbs. basswood, and 445 lbs. fall honey. I fed them 162 lbs. of granulated sugar in Sept.; this, with the honey they had left, makes them, I think, an abundance of winter stores. My best colony gave one swarm and 476 lbs. of honey.

My brother has not finished extracting yet; but his yield will not be quite equal to mine, although his best colony gave one swarm and 616 lbs. of honey. These two best colonies are hybrids, their queens are sisters, and were our best queens last year; they were raised in Aug., 1881, from a dollar queen purchased of W. Z. Hutchinson. We sold our white honey at from 10 to 15 c. per lb., and our dark at 7 and 8 c. per lb. I have just sold three hives of bees at $6.00 each. I thank God for the bees and for GLEANINGS, and pray that Our Homes may do good. G. H. POND.

Bloomington, Minn., Oct. 4, 1883.

Why, friend P., your report is wonderful, even if you are an invalid. But there is one point which you do not make quite plain. I presume you mean that these great yields came from the colony *and* the swarm; and even then the yield is immense. If, on the contrary, you do mean that a single swarm gave, besides the swarm, 476 and 616 lbs. respectively, it would be almost equal to any thing on record. Our great Texas reports, I believe, were from a colony that did not swarm. Will you please enlighten us on these points, and give us very full particulars in regard to the great yield — how often did you extract? how much at a time? how many combs did the colony have? and were they two stories, or spread out? chaff hives, or Simplicity?—I am very glad indeed to know that bee culture has been of benefit to you; and we thank you for the kind words in regard to GLEANINGS, and our work at the "Home of the Honey-bees."

FOURTEEN SWARMS FROM ONE "GUM," IN ONE SEASON.

AND ALL BY AN OLD-STYLE BEE-KEEPER TOO.

I WAS riding along the road one mile from home, and a swarm of bees crossed the road over me. I watched them a little distance, and they settled, and I hived them in an old log gum I got from a friend near by. I carried them home that night, and kept them until March 30, 1882; they swarmed, and in two weeks five swarms came out from that one, and in about three or four weeks two more swarms came out of the same old gum; all were natural swarms, but were small ones, and during the summer I had seven swarms from the young ones — all natural swarms but one, all making 14 swarms I had in 1882 from one gum and the offspring. But they made very little honey. I was at a loss how to winter them, but I let them stay on their summer stands, and I came through the winter with six live stands, and this year I have had 14 swarms, all natural but two, and they are all very rich. I have got about 100 lbs. honey, and will get 75 or 100 more. I could have robbed more, but I was afraid of losing my bees this winter, not being experienced in wintering them; so when I get the book I am ordering from you, I will study something about bees.

I am using a box gum, with racks, some six and some seven racks below, and honey-box above. Some are very slow about working above. I use no artificial comb, nor any thing of the kind, not being acquainted enough with bees to know what to do for the best.

I am a stranger, and my bee-swarming is a big tale, so I will give you some testimony; to wit, the names below: W. L. Harris, W. L. Cornelius, H. B. Turner, Robert Holland, Walnut Grove, Ala.

J. W. AMBERSON.

Walnut Grove, Ala., Sept. 5, 1883.

Friend A., you need not have taken the trouble to send along the names of your neighbors. Your story has the stamp of truthfulness on the face of it. The principal point brought out is, that you have a most excellent locality, and I hope that you will roll up your sleeves and go in for it next year with the aid of improved facilities for taking care of the bees and honey.

APIS DORSATA.

AN EXTRACT FROM HISTORY.

ALTHOUGH *Apis dorsata* has been for some time by general consent dropped, perhaps the friends may be interested in the following:

While reading Wallace's "Malay Archipelago" I came across the following concerning *Apis dorsata*, which I thought would interest the readers of GLEANINGS:

"The beeswax is the most important and valuable product of Timor. It is formed by the wild bees (*Apis dorsata*) which build honey-combs suspended in the open air from the under side of the lofty branches of the highest trees in the forest. I once saw the natives take a bee's-nest, and a very interesting sight it was. In the valley, where I used to collect insects, I one day saw three or four Timorese men and boys under a high tree, and, looking up, saw on a very lofty horizontal branch 3 large bee-combs. The tree was straight and smooth-barked, and without a branch, till at seventy or eighty feet from the ground it gave out the limb that the bees had chosen for their home. As the men were evidently looking after the bees, I waited to watch their operations. One of them fastened his cloth tightly around his loins; and producing another cloth, he wrapped it around his head, neck, and body, leaving his face, arms, and legs bare. Slung to his girdle was a long thin coil of rope; and while he had been making these preparations one of his companions had cut a strong creeper, or bush rope, eight or ten yards long, to one of which the wood torch was fastened, sending forth a steady stream of smoke. Just above the torch a chopping-knife was hung by a short cord. The bee-hunter now passed the bush rope around the tree, taking an end in each hand, the torch hanging just below him. Jerking the rope a little above his head, he set his foot against the trunk, and, leaning back, began walking up it. It was wonderful to see the skill with which he took advantage of the slightest irregularities of the bark to aid his ascent, jerking the stiff creeper a few feet higher when he had found a firm hold for his bare feet. It almost made me giddy to look at him as he got higher up from the ground. Still, however, he kept on with as much coolness as if he were going up a ladder, till he got within ten or fifteen feet of the bees; then he stopped and swung the torch toward these dangerous insects so as to send up the stream of smoke between him and them. Still going up, in a minute or two he brought himself under the limb, and, in a manner quite unintelligible to me, seeing that both hands were occupied in supporting himself by the creeper, managed to get upon it. By this time the bees began to get alarmed, and formed a dense buzzing swarm just over him; but he brought the torch up closer to him, and coolly brushed those off that settled on him. Then creeping along the limb toward the nearest comb he swung the torch just under it. The moment the smoke touched the comb its color changed in a most curious manner from black to white, the myriads of bees that had covered it flying off and forming a dense cloud above him. The man lay at full length along the limb, and brushed off the remaining bees with his hand, and then drawing his knife cut off the comb at one slice close to the tree; and attaching the thin rope to it he let it down to his companions below. He was all this time enveloped in a crowd of angry bees; and how he bore their stings so coolly, and went on with his work at that height so deliberately, was more than I could understand. The bees were evidently not stupefied by the smoke, nor driven far away by it; and it was impossible that the small stream from the torch could protect his whole body when at work. There were three other combs on the tree, and all were successively taken, and furnished the party with a luscious feast of young bees and honey, as well as a valuable lot of beeswax. After two of the combs had been let down, the bees became rather more numerous below, flying about wildly, and stinging viciously. Several got after me, and I was soon stung, and had to run away, beating them off with my net, and capturing them for specimens. Some of them followed me for at least half a mile, getting into my hair, and persecuting me most unmercifully, so that I was more astonished than ever at the immunity of the natives. A bee settling on a passive native probably behaves as it would on a tree or other inanimate object, which it does not attempt to sting." A. G. Mitten.

Fowler, Benton Co., Ind.

MORE ABOUT SWARMS AND SWARMING.

SEVERAL VALUABLE ITEMS ON OTHER POINTS.

Now that we have nearly snowed under our friend Old Fogy with testimony about swarms going off without clustering, I wish to bring another matter before our bee-keeping friends. During the last four years I have had a great many first swarms come out and go back, and about ⅔ of them would lose their queens. How were they lost? A few, no doubt, were so heavy that they dropped after flying a short distance; but I think more are lost this way: I have, when watching the swarms at different times, seen two large ones, after flying around till all were out, a few with the queen would start off so quickly that the most of the bees were left behind who went home. In a large apiary, hives full, honey coming in freely, it often puzzles an experienced person to tell whether there is a swarm out or not, and it is very easy for a small lot to get away and we not see them. I was once watching a large first swarm, and turned away a short time, when, on looking for my swarm, they were gone; and had not the sun been shining, so as to see them plainly as they were alighting on a bush, over a quarter of a mile off, I should have lost them. They went so quickly that about half returned, leaving with the queen only a moderate-sized swarm.

In swarming, when one has the most of the work to do, they have to economize as much as possible in step-taking. Each section of my hive is 4-5 the size of the Langstroth, and I use them two and three stories high. A section is light and easy to handle. I use them as you do the Simplicity, with loose bottom. It is an invariable rule, that they have a frame of open brood, and I set one end of the section on a 6-inch block, thus giving them, if a large swarm, room to cluster under the frames; and with the burlap bag over them, cover raised up about four inches, I let them be till just before dark, and set them on their stands. All that have marked that location will return to the old hive. I don't think it takes me over ten minutes on an average to hive them. When I put them on the stand I raise the bottom about two inches, leaving the cover about 4 inches above the sack; if a large swarm, I give them three sections; so when given the open brood, plenty of room, and plenty of ventilation, out of about 100 swarms a year for a number of years, I *never* have had one leave. On our ranch, we — my better half and myself — think so much of the frame of open brood for swarms that we give a strong vote of thanks to friend Root for giving us the idea. I have every year tried a swarm occasionally without brood, but shall not do so any more, for I have satisfied myself that about one-half will leave. We are often asked, "How do you keep them from leaving?" The answer is, "Give them some open brood." We think it one of the best of the good things that have been given us lately. Friend Doolittle has remarked several times within the last few years, that localities differ, leaving us to infer that he thought bees worked differently in one locality from what they do in another. To that idea I take exception. I do not think his bees do any thing different from friend Heddon's; from bees in Texas, Australia, or any other part of the world, under the same conditions of room and ventilation, always excepting the different workings of the different varieties of the race. *Apis melifica*, given the same conditions, works the same in all parts of the world.

BEES FLYING 90 MILES AN HOUR.

As to the theory of bees flying 90 miles an hour, I have just had a good chance to test the matter. My bees have for some time been working on the refuse fruit of a large cannery, distant 1¼ miles from the apiary, flying directly over the road, railroad close to road. Twice I have watched their flight to the cannery, a light breeze, just enough to stir the leaves, not more than three miles an hour, against them, sun shining so I could see them very distinctly; plenty of them flying about ¾ of a mile from apiary; train running right under them, about 25 miles per hour, the bees flying down hill, empty, far enough from home to get under good headway; yet they went hardly as fast as the train.

Los Gatos, Cal., Oct. 1, 1883. S. S. Butler, M. D.

DO BEES REMOVE EGGS FROM ONE COMB TO ANOTHER?

AN ADDITIONAL FACT IN THE MATTER.

On p 538 of the present volume of Gleanings, a correspondent asks how the bees disposed of the eggs given them from which to raise a queen, he not having been able to find them in any of the combs in the hive. In foot-notes, the following reply is given: "I have noticed eggs being gone when they were given to certain colonies for queen-cells, but have never been able to explain it." Again, p. 566 Sept. Juvenile, in foot-notes referring to Mr. Pond's inquiry, "Do bees remove eggs from one hive to another?" the answer is, "Bees do remove the eggs from the combs sometimes; but I have never been able to prove that they put them somewhere else," etc. As my experience embraces but one instance of such a removal, and that, perhaps, not strictly corresponding with the experience given by the writers, I detail it, not as an axiom in the solution of the problem, but to show very conclusively that the bees do not *always* "eat" the eggs to get them out of the way.

One morning during the swarming season, in the latter part of June last, while looking after a second swarm of blacks that were hived the day previous, I found a dead virgin queen at the entrance of the hive, that had been brought out during the night, so it appeared; and surmising she had received injury when the swarm was hived, I gave the bees a piece of new comb containing eggs taken from a colony of hybrids about ten days old. The third day after the comb was put into the hive, I opened it to see if the bees had started queen-cells, and found the piece of comb nicely fastened, but the eggs had been removed. On further examination I found a fine young queen (the *fittest* survival, probably), and several sheets of comb nearly completed.

Not wishing to further disturb the bees, I waited a few days, after which, on looking the combs over, I found a small patch of capped brood. The queen had not begun to lay, but commenced soon after. When the swarm was hived I have no recollection of seeing any bees in it showing yellow bands, and I do not believe there were any such, for they came from a hive (box hive) of genuine blacks; but there is now, and has been since young bees began to make their appearance in the hive, a slight sprinkling of hybrids, some with two, and others with three indices of Italian origin. In Mr. Pond's operation, the comb containing the eggs was placed over the brood-combs, and a free passage to it provided for the bees from below. The eggs were removed; but as both colonies (the one from which the eggs were taken, and the one over which they were placed) were Italian, there was no way of deciding how the bees disposed of them. In my operation, the eggs were put into the brood-chamber in proximity to the cluster (as close as they could be without breaking it), and the proof evinced in the appearance of yellow-banded bees among the blacks comprising the major part of the colony appears to indicate very conclusively that those eggs were removed by the bees to their own combs, cared for by them, and in due time produced the afore-mentioned hybrids.

ONE-PIECE SECTIONS.

I find in my Oct. No. of GLEANINGS a very concise statement of Forncrook's patent one-piece-section claims. It embodies my ideas exactly; and as I have a section made by myself in Feb., 1878, that is a facsimile of Forncrook's, with the exception of the longitudinal groove, I think my claim is as good as his to the invention. When I "whittled it out" I had seen but one honey-section before—the kind used by the Hetheringtons, as I afterward learned.

Cumberland, Me., Oct. 8, 1883. J. F. LATHAM.

Friend L., your fact is a good one, yet I fear you are in error in one respect. You say your black swarm was a second swarm, and so of course it would have a virgin queen. Now, if Italians were all around you, this queen would most likely meet an Italian drone, and you quite probably have the kind of bees you mention, without their coming from that patch of brood. The case is a singular one. I have never known bees to move eggs in regular order so as to make a patch of brood somewhere else, although we have many reports of moving eggs or larvæ for starting queen - cells, and these queen-cells are often on their old combs.

REPORT FOR THE SEASON OF 1883.

FRIEND DOOLITTLE HAS STILL ANOTHER GOOD YIELD.

It will be remembered that I put in winter quarters, a year ago, 80 colonies of bees, 37 of which were to be wintered in the cellar, and 43 on their summer stands. Of those wintered outdoors, 32 came through alive, 20 of which were fairly good colonies, and the remaining 12 from weak to very weak. Of the 37 placed in the cellar, all came through alive, and 34 of them were good colonies, with but 3 weak ones, showing that, for a steady cold winter, the cellar is the best place to winter bees in this locality. Elm and soft-maple yielded pollen quite plentifully on April 14, so the bees were set out of the cellar, as it has been published that, when pollen becomes plentiful, was the right time to set the bees out, for we could then depend on warm weather. However this may be as a rule, it did not work this time; for in a day or two it came off cold, and we had two weeks of very cold weather. On the morning of April 30, Skaneateles Lake (16 miles long and 2 miles wide) was frozen over nearly the whole length of it, the mercury going as low as 18° above zero. This killed all the pollen flowers which were open, or near opening, and reduced our bees, as to numerical strength, greatly, especially those just out of the cellar. By sale of bees and queens, my number was reduced to 55 colonies, 40 of which I decided to work for honey, and the remaining 15 were to be used for queen-rearing, as they were too weak to be of much value to produce honey.

Our season has been a most peculiar one. About May 10 it came off warm, and remained so for about two or three weeks, when it began to rain, and it was rain, rain, nearly every day from then till about July 30, at which time we had about two weeks of dry weather, when it commenced to rain again, we having but two or three dry days at a time since. Besides, the season has been universally cold—so much so that corn was at least a month later than usual, the frost killing it before most pieces were ready to cut. Owing to this cold and wet weather, the bees were scarcely able to get a living up to July 16, although the fields were white with clover, and blossoms were plentiful on every hand. I had to feed about two to three hundred pounds of old honey, to keep mine along in good condition to take advantage of a flow of honey, should such happen to come, which thing happened on the morning of July 16; for at that time the basswood opened its flowers, sparkling with nectar, inviting the bees to a feast which they were very glad to accept. Although it rained nearly every day for the next week, still the bees would rush out as soon as a shower had passed, coming home a little later, so loaded as to be unable to reach the hive. As the basswood flowers are so shaped that they shed rain, it keeps the water out of the nectar, so the bees can work after a rain, when they could not do so on clover and other flowers, which stand upright so as to catch all the water. At the end of a week it came off cold, and for three days scarcely a bee ventured from the hive, for the mercury rose scarcely to 50° during the middle of the day. But when it did warm up, the bees were on hand again; and during the next week they seemed to revel in honey to their hearts' content. By this time the basswood blossoms were dried up here at home; but still the honey came, and for 5 days more the combs in the sections grew as if by magic, from honey brought from the basswood on that hill 6 miles or more away, which you, Mr. Editor, and a few others, have tried to make us believe our bees never visited; or if they did, they did so to no advantage. On Aug. 11 the bees found the honey nearly gone on the hill, and by the 13th the end of the honey harvest for 1883 had arrived; for after basswood, the bees obtained scarcely a living (as buckwheat gave no honey), which makes the sixth year it has failed us. The result of our basswood yield proved to be 2388 lbs. of comb honey, and 1922 lbs. of extracted, making 4310 lbs. in all from the 40 stocks in spring, or an average of 107¾ lbs. per colony. Our comb honey was sold to a man buying for a Boston house, at 16c per lb. for most of it, delivered at our nearest railroad station, and our extracted is selling readily at 10c per lb. Adding to our honey the sales of bees and queens, I find I have $1021.30 as the *net* proceeds from my bees for the year 1883, notwithstanding the loss of bees during the winter, and the cold wet summer. As I have 80 colonies today in as good condition for winter as they were a year ago, I can safely give the amount above as my salary for one year's work, caring for 80 stocks of bees. G. M. DOOLITTLE.

Borodino, N. Y., Oct. 15, 1883.

Friend D., it is certainly encouraging to hear that you have come out again with a fair crop of honey; and it enables us to say, when people tell us doleful stories about bad seasons, that there is at least one man who gets a good crop of honey, even during a bad season, and that he does it year after year continuously. Do you mean that you retail your extracted honey at 10 cts. per lb., or is that what you get for it in barrel lots? If the latter, the price is very fair; but if the former, I should think it is getting down pretty cheap.

QUEER EXPERIMENTS IN WINTERING.

SOMETHING NOT MENTIONED BY VIRGIL.

WE have all heard how deadly pollen is for bees to eat in winter; and I had no very great inclination to kick against the doctrine; but then, "I wanted to know, you know." If a colony was very strong in numbers, and so protected from cold as to have but little trouble in keeping warm, who knows but they would winter with nothing else than pollen to eat? I am afraid I did not secure the conditions mentioned very well, but thus and so I did. A pit was dug in sandy soil, between two and three feet cube in size. Within upon four blocks, and with no bottom-board, was set one story of a hive. Eight combs were so spread as to fill the space designed for ten; and six condemned colonies of bees were shaken in higglety-pigglety to form an extra-strong stock. You see, it wasn't quite so naughty as brimstoning the bees — this spending them on an experiment. The frames of comb used had been run through the extractor, but were heavy with pollen which had been stored by queenless colonies. Three of the combs, however, contained a little honey, about 5 lbs. in all; so the bees could commence living on honey, and then learn to eat the other fodder. Upward ventilation was left at one side and end of the top, and the rest of the top was covered with enamel cloth reinforced by a number of thicknesses of waste paper. A big sheet of tin arched above made sure against any droppings of water. A board cover was put on the pit, over which earth was heaped up. Another pit was tried the same way, except that all the combs were emptied of honey, and some dirty and partly soured liquid honey, tied up in a cloth, was laid upon the top of the combs. This work was done Oct. 26th and 27th, and on the 4th of April I dug in and found them—all dead as nails. The first colony had eaten all their honey, but only a little of the pollen. Some dysenteric excrement was found on the frames, but not very much of it. I "guessed" that the last bees had died in March some time. The second colony looked to me as if they had all perished in December. None of the pollen seemed missing, and there were no signs of any of the honey having been stored in the combs. The honey had gradually leaked down and wasted, probably. And still I'm not quite easy in my mind. Like the good man of whom I've heard my father tell, who was confident he could walk on the water, "I think I'll try it again."

Four more similar pits were dug, and furnished with substantial board covers, on which a big sheet of tin was also laid to keep out the rain. No earth was shoveled upon these, but the covers were propped up in mild weather, and let down in severe weather. This, you see, was a sort of compromise between outdoor wintering and cellar wintering, the hives being perfectly protected against wind, but only partially so against frost. For breathing purposes they had some of the time free outdoor air, and some of the time confined air. You kindly suggested last fall, friend Root, that a tile drain be laid, opening into each pit, for sub-earth ventilation. That would, indeed have been the proper way; but if I had waited for time to do that, the experiment would not have been tried at all. To occupy each of these four pits, one hive (just as it stood after the sections were taken off) was set in. Enamels and cushions had been put above the frames when the honey was taken, but the frames were not loosened at all. Now for the result. During the fearful ocean of slush we had in February, the surface water got a channel into one pit, and drowned the occupants. The others came out well—fully as well, I thought, as the average of those packed two and two above ground. The colonies in pits used a little the most honey, I think. With the addition of the tile-drain ventilator, I judge that this would be an excellent way to winter a small apiary. For a large apiary, the work involved in opening and shutting so many covers so many times would be a serious objection. When the covers are raised in mild weather the bees can take flight from the pits, and return again.

Two other pits were dug, and three poor, light colonies were put in and buried up "for keeps," one in one pit and two in the other. When dug up, Apr. 4th, two were dead and one living. The weakest in numbers had died of dysentery before eating half of their honey. The other defunct one also left some honey, and perished with dysentery. The surviving colony was weak, and dwindled out during the spring.

I had also three late swarms that inhabited holes in the ground, and had never enjoyed the blessings of a hive "at all, at all." Their premises may be described thus: A trench, about 18 inches wide by 3 ft.

long, was cut in the ground, across one end of which two pieces of old picket stuff were placed; and on the pieces, ordinary frames were hung. To guide the bees about starting to build, one frame filled with comb was hung in the center, the frames on each side of it having only starters of fdn. Thus the swarm occupied one end of a covered trench while the other end was simply unoccupied space. The top was covered with boards, and on the boards earth was heaped up, except where a crack between two boards formed their entrance-way. The fall harvest had been poor, and they were light in stores; but I told them they must be prudent of their honey, and make it last, for I wouldn't give them any more. They had about 8, 9, and 10 lbs. respectively. This was not bad, considering the time they had had to gather it in, as two of the swarms were—domiciled—Aug. 15th, and the other Aug. 20th. When I dug in, about the middle of March, one colony had starved, and two had come through tolerably well. The colony that perished, and one of the surviving ones, had suffered some with dysentery. *During the cold part of the spring these hole-in-the-ground colonies built up much faster than the average of colonies above ground;* but when steady warm weather arrived, just the reverse was the case. I hoped greatly that so much room and coolness would prevent swarming; but, alas! it doesn't do any such thing. In preparing them for winter I suspended a division-board on each side of them, put an enamel sheet over them, then some waste paper, and then a sheet of tin. The cover was then replaced and earthed up a little more than before, but the entrance-hole was left open. Part of the time during winter it was drifted over with snow, and part of the time warmth from within kept a hole open. So I report that bees prosper well in holes in the ground, winter well, and swarm, just the same as any bees; but I have not yet hit upon a very convenient way to take surplus honey from them.

The experiment with the thirteenth colony was rather a botch, and perhaps it is not necessary to give the details. It was the strongest and best of the colonies tried experimentally; came through alive but weak, and dwindled away in the spring.

My figures last month got a little inebriated. Subtracting 13 from 130 doesn't leave 126 quite; it leaves 117; and as the odd one, of course, had to be packed alone, there were 116 instead of 126 packed two and two. E. E. HASTY.

Richards, O., Oct. 18, 1883.

Friend H., I am very glad indeed that you have, by these experiments, given us considerable information on this matter of partially burying bees. I have for some time been well satisfied that chaff hives and other similar protections have the objectionable feature you mention in regard to holes in the ground, and that, while they protect from the severity of the weather in winter, when warm spring weather comes they deprive the bees of the warmth of the sun, and are too slow in getting warmed up; however, as they very shortly become a protection against the rays of the summer sun, on the whole we usually find a gain by protection. I have often thought of having the bees partially in the ground, thus saving them from the disastrous effects of cold winds; and I believe yet that your plan may be developed so as to be one of the best for wintering bees. In regard to that pollen matter, I wish you could be sure that your bees that had almost nothing but pollen had lived until March, or even till February. Many times bees seem to get along after a fashion when the stores they consume are mostly pollen; but for all that, I believe I would rather they should get along without it until they commence raising brood.

* * *

A GOOD REPORT FROM NORTH CAROLINA.

ANOTHER ROUSING REPORT FROM A FOUR-STORY HIVE.

I COMMENCED the season with 21 weak colonies. I now have 42; have sold one, and gave one to my son; have taken 2100 lbs. honey—500 lbs. comb, 1600 lbs. extracted. I also have about 200 lbs. in the frame, ready to set in the hive if needed. My crop of honey is nearly all sold at 12½ cts. per lb. for comb, and 10 cts. for extracted. I had none built in sections; my comb honey was made mostly in half-story frames, cut out in 4 pieces, laid in tin cans, and extracted honey poured over it till covered; it was very nice.

My crop of honey was all sourwood, except about 200 lbs. Myself and neighbors were astonished at the amount made by my little stock of bees. My best hive (spring count) made 316 lbs. extracted honey; another, which sent out no swarm, 260 lbs. extracted. From this hive, on the 13th of July I took 87 lbs., and on the 27th, 124 lbs. This was a 4-story hive. Does it pay? Let us see how profits compare with expenses:

23 colonies increase ($5.00 per colony) -	$115 00
1600 lbs. extracted honey at 10c per lb., - -	160 00
500 lbs. comb honey at 12½c per lb., - -	62 50
Queens sold - - - - - - - - -	30 00
Total, - - - - - - - - - -	$367 50
We will put labor and expenses at - -	67 50
Which leaves a profit of - - - - -	$300 00

I see reports ahead of this, but I think this should satisfy an A B C scholar.

Friend R., I am under many obligations to you for your A B C book and GLEANINGS. They are worth many times their cost. I use the Simplicity hive; I made them by the directions laid down in the A B C book. I have been a bee-keeper for 25 years on the old box-hive plan. My crop of honey this season was worth more than all made in the 25 years. The Italians are far superior to the blacks, in my estimation. Their gentleness while being handled is one very desirable trait, and they gather honey at times when the blacks do not seem to find any. They increase much faster, and the only fault I have found with them is, they swarm too much; but that is not serious.

The flow of honey from the sourwood commenced June 24, and ended July 24. Since that, bees have been gathering enough to keep up brood-rearing. My bees are in good condition for winter, except a few hives that failed to store honey in the brood-chamber. I will say in regard to the sourwood as a honey-bearing tree, that we, in my opinion, have made a great mistake in clearing our lands for the purpose of raising tobacco; but we have more sourwood yet than bees. There were tons of honey lost this season for want of bees to gather it, in Eagle Mills township. Better send over some of your Ohio bee-keepers, and help us take care of our honey. Up to this date very little interest has been taken in bee-keeping. But the time has come, I think, when the people will wake up to their better interests.

When I commenced hive-making and transferring my bees three years ago, some said it would never pay; others said I was crazy; but what a change my crop of honey wrought! Some can hardly believe the truth in the case; others would not, if they had not seen it with their own eyes.

TOBACCO.

Before I close I must tell you that I have quit the use of tobacco, after being a slave to it for 40 years; have not used any for seven months; am free from it; have no taste for the weed. The result is, I have gained 20 lbs. in flesh, and have my health better than in the past. I do not send you this for a smoker, but I feel rather indebted to you. By reading the Tobacco Column I found that others had thrown off the yoke, and that encouraged me to try; and by the help of God I am free. W. D. THARP.

Eagle Mills, Iredell Co., N. C., Sept. 24, 1883.

Many thanks, friend F., for your very kind words, and also for your rousing report from North Carolina. We have had so few large reports from the northern part of the Southern States that I have sometimes felt a little sad about it. But here you come, demonstrating that North Carolina — at least some portions of it — is all right; or at all events so far as her honey resources are concerned.

HOW I DIDN'T DO IT.

CONTROLLING SWARMING, AND GETTING SURPLUS HONEY.

WITH the editor's permission, I will tell the A B C class (of which I am a number) how my plans for getting a big crop of honey this year miscarried.

Last fall I had 23 swarms, all of which wintered fair. In the spring I concluded to work them all for surplus honey, and have as little increase as possible. They were in Root's chaff hives (non-swarming hives, you know). Two of my strongest colonies, I prepared to extract from. The spring was very late, but the bees built up fast; and about the 15th of May I began to see a small cloud ahead, about the size of a swarm of bees. May 20 they commenced to swarm, and they kept at it pretty steadily until the middle of July, when the honey ceased very suddenly. Among the first to swarm were the ones I had prepared for extracting, by giving plenty of empty combs, one of them swarming without going into the upper story at all.

As my first lot of queen-cells did not hatch well (I think I injured them by shaking the bees off the comb when I went to cut them out), I laid a part of my trouble with after-swarming to not having laying queens to give the old swarms; and when I got some queens to laying, I thought my trouble was mostly over; but when a swarm issued, and I gave the old hive a laying queen, about half of them would keep her a prisoner until she consented to lead out a swarm, and cutting out the queen-cells made no difference. While I think of it, I will say that, when you cut out queen-cells, unless you know just when they are likely to hatch, cage them. When I was very short of queens I cut out three and laid them on my box; and before I could shut up the hive, two of them hatched out and flew away; and although I waited for them a long time, I never saw them again.

CUTTING OUT QUEEN-CELLS.

As a sample of the way they swarmed, one colony of hybrids sent out three swarms; and when the fourth came out I thought I would try to stop their antics. I went to the hive and destroyed 13 queen-cells; and as I could find no queens I thought I had the best of them. I then went to the swarm that was out, and killed two queens, and they went back to the old hive. Just at night I went to see if they were quiet, and found 4 queens on top of the enamel cloth, sounding their war-bugles, and no other bees with them. I caught them, and next morning I found two in the same place. After that they came out three times more, and I killed five more queens, and that left the hive queen-*less*. My two best Italian queens led out swarms, although I had robbed them of brood until they had but two frames of brood each, and not many bees. Thus, you see, when the bees get to swarming, the rules of all the bee-masters fail. Now, I find, after putting back swarms and putting two together as long as I could make them stay, I have 50 colonies and 900 lbs. of honey in sections. There are a few lessons I have learned this summer, one of which is, to use no more drone comb in sections. I had drones raised in about 100 sections this summer. I use no separators, and had but 9 sections out of 1100 that would not pack in a case. Now, if any of the old hands can tell me how I should have managed under the circumstances, I should feel thankful.

THE BREAD-PAN FEEDER.

Friend Root, I see you rather condemn the bread-pan feeder which you used to recommend so highly. Now, I think it is the best, handiest, and cleanest feeder in use, and no bees get drowned in mine. I make a rack of narrow strips that will fit loosely in the upper story of a hive, and nail blocks under the corners, just long enough to raise it above the pan; fill the pan; turn back one end of the enamel cloth; put in the rack; put the chaff cushion on top of that, and tuck it down snug, and it will take a cold night to drive the bees down out of it. JOHN WOOLSEY.

Bedford, N. Y., Oct. 22, 1883.

So, friend W., after you had killed all the queens, and destroyed all the cells, five more queens hatched out. I guess you did not have on your spectacles then, did you? We never have the swarming mania in our locality, such as you describe, and therefore I could hardly suggest a remedy. When bees swarm with us, they almost always get honey as well; and so we have learned to consider swarming as a good omen.—I am glad to know you like the bread-pan feeder. It certainly is simple and cheap, and your improvement would be a fine thing, doubtless, in cold weather.

HOW TO SELL HONEY.

SOME EXTREMELY SENSIBLE IDEAS.

AFTER reading a good deal about the great honey crop, I fear that some are afraid they will not get rid of their honey. Now I will tell you how I am selling my crop as fast as I take it from the hives, and could sell it faster if I had it.

For a sample, I take a quart jar. I put in three nice pieces of comb honey; then fill in with extracted. This makes the honey look fine. I then take this in my hand, and go to the largest town, and small too, as well, or in the country. I go to private families, into places of business, and talk honey to everybody I meet. I take in all kinds of business places, except saloons. I went into a few of them, but did not have any success. I go right into the court-house to the lawyers, to the churches, etc. When I meet with men and ladies on the streets, "See that honey!" "Oh! isn't that nice?" etc., is about the way they talk.

Being out in the sun does not hurt it a bit, you know; but does it not look a little bit forward, to go right into a business place to sell a little honey? I think it is the best to take orders first, then deliver in a few days. I sell my customers just what they want, and deliver in two or three days. I am getting 60 cts. each for the 3-lb. jars; 20 cts per lb. for comb honey, and 15 cts. for 20-lb. stone jars, put up in the same way the quarts are.

This is the point: Put up your honey in nice shape, and take it right to your customers. I sold 18 lbs. the other day to a man in the city, who did not look at it — *he bought of me last year.* I am gaining customers all the time. They are coming from the east and coming from the west, and they all join together in speaking with praise. But I don't lay my armor down, nor think the victory won yet; I expect to go forward with a steady step.

Later.— My honey is all sold — 2000 lbs., and am buying more. I am going to spend the winter selling honey, and no one can tell how much I shall sell. For the last two winters I sold fancy goods to the ladies; but I think I can make more selling good honey.

want to thank you for the prompt way you have filled my orders this summer. J. R. LINDLEY.

Georgetown, Ill., Sept. 20, 1883.

Friend L., I am much obliged to you for your extremely vivid and plain way of telling people how to sell their honey. Your article contains the real essence of success in any pursuit. It is to put your whole soul into it. You want nice honey in nice packages, so that you won't be ashamed to show it to anybody, even ladies you meet in the street, as you say, and then have every pound you sell just like it, and it would be nothing strange at all if folks gave you orders without even looking at it. Yes, that is exactly what a good reputation does for any one, in any kind of business.

HOW DO BEES RECOGNIZE EACH OTHER?

I HEREWITH send you a translation from the German of M. Schachinger; and if you think it would interest the readers of GLEANINGS, you can make such use of it as you think fit.

It is surely a striking phenomenon, that so many thousands of bees that live in the same hive, and under one queen, and whose period of life in summer time does not exceed six weeks on the average, can recognize each other so quickly and surely as to be able to detect a strange bee, scarcely differing from themselves in shape, size, and color, that is unhesitatingly attacked by a sentinel and forced out of the entrance in a fierce encounter. The bees seem to make an exception to this rule (of making strange bees keep their distance), only in the case of very young bees; that is, those taking their initial flight, and happening to alight at the wrong entrance, and of those which, coming to the hive laden with honey or pollen, miss their own home because of exhaustion, inclement weather, etc., and are compelled to seek one elsewhere. This is readily granted them, and henceforth they become true members of the family which has adopted them; and should they, in their turn, become sentinels, they would undoubtedly attack their own sisters, in case the latter tried to force an entrance into the hive.

A personal acquaintance of the bees with each other we must deny absolutely, because of the enormous number belonging to a single stock, their short life in summer, and because all are rarely in the hive at the same time. Neither can color be a sign of mutual recognition; for bees to whom a queen of a differently colored race has been introduced do not molest the progeny of this new queen, this progeny having a color differing greatly from that of the first queen. We therefore have remaining, speech, and the sense of touch and smell, which may serve them as a means of recognition.

For a long time bee-keepers were of the opinion, that a kind of speech existed among the bees, and that, accordingly, a certain watchword (so to speak) enabled them to distinguish strangers from those belonging to their own hive. Of course, bees have certain sounds by which they express emotions, and cause themselves to be understood outside the hive; for instance, the vehement shrill cry produced by an angry bee that wishes to drive us from the vicinity of the hive soon attracts a number of sister-bees from neighboring hives, whose combined attack finally compels us to beat a hasty retreat. Similarly does the swarm know how to call its thousands of members together in a few minutes, by the well-known joyous call-note. But all these sounds, of which the human ear has been able to detect nearly thirty, and judge of the meaning, are such as are common to all the bees, and by which, it is true, they can express the most diverse emotions, but which can never serve as the watchword of a stock.

Others thought that bees recognize each other by the sense of touch, for they have often been observed to cross their antennæ in the hive, as if in the act of communicating something to each other. This view has a strong claim to probability, with this modification, that the sense of smell also has its seat in the antennæ, so that not the sense of touch, but that of smell, forms the means of mutual recognition. Now, if this same sense serves such a purpose, there must be in every hive a being that is capable of giving to all its inmates a peculiar and distinct odor. Without doubt we can consider the queen to possess this function, which, in passing hither and thither through the hive, gives to each and every bee the same odor, which act, as has been observed, takes place by the queen ejecting a fine fluid. This explains the fact that those bees, coming home honey laden, and whose odor is rendered less intense by flying through the air, and by coming in contact with so many flowers, can gain admittance even into strange hives, without being hindered thereat. The fact of their being loaded with honey is not the reason why the sentinel bees allow them to pass, but it is the neutralized odor, which prevents the sentinels from distinguishing them from the bees of their own hive.

If we take bees that have, in consequence of fear, annoyance, or similar causes, filled themselves with honey in the hive, and put them in the entrance of another hive, they will, in spite of their being loaded with honey, be attacked and pulled out without much ado; a proof that it is not the honey carried by the bees, but some other factor which determines the acceptance or repulsion of a bee. The young bees which are generally readily accepted by neighboring stocks seem not to be infected by the odor of the queen as much as the older ones, which accounts for their immunity from attack. In the case of other beings, also, youth enjoys a certain indulgence. Why, then, should bees be so cruel to *their* young? Robber bees that enter a strange hive to carry its stores to their own are at first violently attacked and energetically repelled; but if they are successful several times, they can thereafter enter and leave the hive untouched. They have, in all likelihood, been infected by the odor of the queen during their stay in the hive, and therefore can not be distinguished by the sentinel bees, which have probably soon accustomed themselves to the smell of the robber bees, because the latter generally enter a hive in large numbers.

The following, also, in itself a very striking fact, is easily explained if we accept the above supposition; namely, that bees from hives containing impregnated queens unite neither among themselves nor with swarms having unimpregnated queens; whereas the latter kind of swarms unite with each other most readily, and their queens quietly engage in the decisive struggle. It is probable that the unimpregnated queen ejects none, or very little, of the above-mentioned fluid, so that the odor of the bees which are with her is less marked.

Far from the hive, while gathering stores, bees are outspoken cosmopolitans, neither troubling themselves about their foraging neighbors, nor knowing envy; but they are impelled solely by their instinct to make the most of nature's treasures. At home they are jealous of every stranger; in the field, they magnanimously give way to each other.

A. H. STIEBELING, M. D.

New York, N. Y., June 6, 1883.

Many thanks to you, friend S., for your translation. Although you bring out several new and wonderful facts in this strange matter, I hope you will excuse me for saying that I can not as yet accept all the conclusions arrived at, in all cases. One fact in particular struck me the moment you mentioned it, as being true; and that is, that the bees of a hive can not possibly have a personal acquaintance with all the rest of the bees of that hive; they do not know each other by their countenances, if I may be allowed the expression, as we do. Neither do they know each other by the sound of their voices, because the bees of any one hive have voices in common with the bees of any other hive. They do not know each other by the hats and coats they wear, as we do. Then how do they know each other? I have been sorely puzzled on this same point, and I have sometimes thought that they detected a robber simply because he acted like a robber, and for no other reason, just as a sharp policeman will detect a vagrant or a tramp by the way the fellow acts. He may pretend he has some sort of business on hand, but it is a pretty hard matter to make believe you are a business man when you are not. So I have thought it might be with the bees. A robber may try to pretend that he belongs in a certain hive, and I think they do try to do this very thing; but it is a pretty hard matter to deceive the sharp sentinel. In answer to the query, "What are you doing around here?" the robber is never able to give any satisfactory reply. I think I have seen them take hold of other robbers, and make a pretense of acting as sentinels. But even in this they had a cowardly and sheepish way that was pretty sure, sooner or later, to turn attention toward them.

Now in regard to the matter of difference in scent. It may be that each hive has a peculiar scent or odor of its own that enables the inmates to detect any bee from any other hive; and it may be, also, that the queen gives this characteristic odor in the way you suggest; but it seems to me almost incredible, even though I can not give any other or better explanation, perhaps. In proof of your position, my good friend Schachinger, this occurs to me: A sagacious dog will scent his master's footsteps, even though a thousand people have passed along the same track — or, at least, I have been told so. Can any one tell me if the same is true? Take it along the busy street, for instance, and over a stone pavement, a thousand people may be passing, and the dog's master is only a certain one among this thousand, yet he follows him unerringly. It just now occurs to me, that if each individual of the said thousand were in the habit of washing his feet every day, it might be a little more difficult.

Now, then, to go back to the bee question: Do bees detect robbers by the sense of smell, and no other way, or is it by behavior? One more point in the article above, I think, needs attention, and it is this: That whatever wonderful power or skill the bees possess, they do not learn it as we learn handwriting and language, for they live only four or five weeks; and yet, wonderful as it is, every bee in just these few short days is a perfect graduate in all the arts and sciences known to bee lore.

Ladies' Department.

BEES AND BEE CULTURE IN MISSISSIPPI.

ALLOW me to give you my experience in regard to bee-keeping. So much talk is going on about all the different kinds of bees, that it is difficult to say which are the best. For my part, experience has taught me that the native bee is always the best. My bees are neither blacks, hybrids, nor Italians; they are of an ordinary brown color, and are exceedingly large, and the queens are the most fertile layers I have ever seen.

Last fall I had 12 colonies, and they passed through the chills of winter, without my making any preparations whatever for them. But this I need not tell you, as you are perhaps aware of the kind of climate we have here. Orange-trees began to bloom about the 10th of February, and bees set to work in such a manner that I thought they were going wild. In they rushed, laden with honey taken from these blossoms, and bringing lumps of pollen on their tiny legs. I opened several hives, and, to my astonishment, there were hardly any bees in, excepting those that were discharging their loads of nectar. The queen would seem to be entirely deserted. Again, at night I would look, and (they being all at home) I found that there were bees enough to make ordinary colonies. Brood-rearing was commenced in earnest, and my first swarm issued on the first day of April. My yard being full of young orange-trees, I merely beat a tin can, and they alighted on a tiny branch. I would then get my hive, put it in the place where I intended for it to stay, and go and clip off the branch and carry the bees to their destined home, having before placed one frame of unsealed brood in the center of the hive, no more than 5 minutes' time being occupied in the whole operation. Sometimes they would alight on the trunk of some trees, and, if too high, I would stand on something, and with the smoker keep them off or make them march to some small branch where they could be more easily managed.

There were only eight of my colonies that swarmed, and from them I got twenty natural swarms. But by uniting and adding, I increased from 12 to 26 only. Not having hives enough, I placed them in the common box hives that are used around here. These four of my colonies gave me 3 swarms each, and the other four 2 each.

Now I will give some news about the eight first swarms I took. Each when hived was given one frame of unsealed brood; and before three weeks' time they had every one of the other nine frames completely worked, and either filled with honey, pollen, or brood. There being no more empty space, I had to resort to the extractor, and I took every drop of honey from them, and did it again in two weeks after, and they have their hives now crammed with honey. But I do not intend to rob them now, as honey is very scarce, owing to the extreme drought we have here. No rain for the last three months. I will wait till the fall crop comes, to extract.

In one of my swarms I had one frame that was sealed from top to bottom with honey, and it weighed 6 lbs. I have noticed in some, especially the strongest, that at the bottom of the hives were to be seen the minute pieces of wax that they let fall from their bodies, the mania for honey being so great that they did not take time to work it into cells. As soon as a cell was finished it was filled and immediately sealed; and when the last cell was completed it was sealed, and the frame looked like a sheet of white paper. This year's honey crop has been the largest we have seen for some time. Like yourself, I am a firm believer in giving unsealed brood to a swarm, and I have never had a swarm leave me when thus furnished.

MRS. M. R. BLAIZE.

Bay St. Louis, Miss., Sept. 28, 1883.

My good friend, I fear you have not had much experience with other races of bees. Although your bees did well in increase, we should hardly regard your description of the honey-flow as up to the average. Either your bees are slow, or the pasturage poor, I should say, if it took them three weeks to fill their combs, and then two weeks more after you had extracted every drop, as you say. During basswood flow our bees would fill their hives in two days, even if we extracted every drop; and with the aid of comb fdn. I should expect a new swarm to have their hive full of brood and honey, in one week or less. One day a good colony brought in 18 lbs. in our apiary, here where we have so many in one point that the locality is a little overstocked. Nevertheless we thank you for the very interesting report you have given us.—By having plenty of empty combs you will avoid this waste of wax which you speak of. The wax scales on the honey-board are often quite an item.

BEE-NOTES FROM FLORIDA.

You ask for bee-notes. Perhaps a few from Florida by one of your A B C class would be of interest. Oct., 1872, I got a three-frame nucleus of Italians. I did not know one thing about bees at that time, but I had ambition for years to have an apiary. The first swarm issued May 2d, and another May 12th. Then the first swarm cast one Sept. 7th, and now it has a fine queen-cell; also my original colony. The first swarm left the hive for three successive days, and we had all sorts of trouble with them, but it was the first swarm I had ever seen, and I was determined to keep them, so I put mosquito netting over the hive, and kept them in till after sundown. Then every thing that contained water had a ring of bees around it, and I did not have any more trouble with them. This has been a dry, unfavorable season, I think; and as I did not want comb honey, I have filled all the frames with comb so as to be well supplied when I get my extractor, which I order with this. I have taken only about 25 lbs. from them, but hope to have a better report next year. There was no day last winter, unless it was raining all day, but that they were at work. I attend to them entirely, receiving assistance only from my husband, in swarming and in hive and frame making.

MRS. BELLE MCMAHAN.

South Lake Weir, Florida, Oct. 3, 1883.

SWARMING ON SUNDAY, ETC.

Has any one found out a sure and easy way to keep bees from swarming on Sundays, when run for comb honey? I want to keep bees, but I don't want to stay at home on Sundays all summer. Will Mr. Doolittle tell us *exactly* how he manages when his bees are working in sections, and swarm? Neither the old stand nor the swarm will be strong enough to work in sections, and perhaps the best of the season may be over before they are ready again. I have tried Mr. House's plan of giving the swarm most of the bees and brood from the old stand, but they would generally swarm out in a day or two again.

MRS. M. A. SHEPHERD.

Barry, Ill., Oct. 1, 1883.

If I am correct, my friend, Mr. Doolittle's plan of managing an apiary on Sunday is to stay home from church and look after them. But as I have said before, I do not believe I could feel really satisfied with any business that would keep me away from church.

"Forgettery,"

Or Department for those who don't Sign Their Names, etc.

INCLOSED please find $1.25 for cloth-bound A B C. Better send it per express at my expense, as I do not know what amount to inclose for postage. I also inclose $1.00 for GLEANINGS. Kindly send invoice for the book, so that I shall have no difficulty in getting it past the customs.

Yours faithfully,—

Highgate, Ont., Can., Sept. 10, 1883.

You observe how careful our friend is to tell us about "passing customs," and even then signs "yours faithfully." Now, Mr. Whatsyourname, we have not any doubt about the "faithfully," only we wish you would be a little more faithful to your own interest—enough to say who you are. After our friend had waited about 20 days he writes again as follows:

I inclosed the cash for A B C and GLEANINGS over two weeks ago, by registered letter to you, and as yet I have heard nothing in reply. Did you receive the money, and why the delay? Please kindly say by return mail, and greatly oblige—

Highgate, Can., Oct. 2, 1883. W. L. SOULES.

This time he uses a printed letter-head with his name and address all printed plainly, and signs it besides. From this it appears that folks who do have their names printed plainly on their stationery, sometimes forget and use stationery that does not have it on.

Heads of Grain, From Different Fields.

YOUNG QUEENS LAYING DRONE EGGS.

DON'T your young queens lay drone eggs? Why, you are surely behind the times. Over one-half of mine did this year. I have a young Italian queen that mated with a black drone. She filled all the drone-cells she could find in the hive, and they hatched out drones too. She is not a poor queen either. I have another "dollar" queen that I bought from you that lays drone eggs. I have a beautiful queen that I bought from J. T. Wilson that raised a lot of drones. She was a young queen too. By the way, this is the best queen in the apiary. This was besides what queens I raised myself.

Friend D., I rather think you must have a pretty good locality, to give your young queens such encouragement as to cause them to lay drone eggs the first season. I knew it sometimes happened, but I did not suppose as often as you mention.

HOLY-LANDS.

I have a hive of Holy-Lands, and I like them too. I can lift the frames out without smoke (if nobody is around). They are great bees to rear brood. Why, it makes my hair stand to see the way that they use up frames of honey. In regard to quietness, I think they are about the same as the Italians. If any robbers hang around, they soon get their "necks jerked."

I believe I rather agree with you in regard to the capacity of Holy-Lands to use up stores. They raise brood at a terrible rate, but it takes lots of provisions to keep them going.

ROBBERS.

What kind of bees do you find to be the worst robbers at your place? The worst hive I have is the gentlest hive of Italians. I can work with them without smoke, and they are very "yallar." I can't open a hive but they pitch into it. It seems to me the quieter a hive is, the worse it is to rob.

With us, by all means the worst to rob are the blacks, or those having just a little Italian blood.

PACKING BEES.

I am packing my bees at present too early, am I not? Well, it doesn't matter; better early than never. I guess I will pack them all at present, if I do not change my mind; but the Holy-Lands, I expect they will break me up buying sugar for them. Well, if they live through, I'll let you know how much honey they *don't* make. I want you to tell us how to pack 185 colonies of bees so as to lose only 100 of them.

I do not think it too early to pack the bees after they have stopped gathering surplus. In fact, we have ours packed the year round.

METAL-CORNERED FRAMES.

W. Z. Hutchinson is right about metal-cornered frames. This is my reason for not liking them: They make the bees' feet cold when they walk over them. You have so many colonies, I suppose you don't care; but if you had six hives, more or less, as I have, you would not want any of them to get their feet frozen.

Our bees are not in the habit of standing barefooted on the metal corners when the weather is cool. They draw into a compact cluster toward the center of the combs, and a bee has no business around the metal corners, unless the weather is warm enough for him to look them over and see that no propolis is needed, and that there are no moth worms to be dug out.

CANDYING HONEY.

I put some very thick honey into a can that had a little candied honey on the bottom, and it has all candied. I put some of the same honey into a clean can, and it shows no signs of candying yet. Now, here it is; if anybody wants candied honey, let him put some candied honey in nice thick honey, and it will candy. I don't expect it will if you want it to, though. JOHN DALLAS.

Sharpsville, Pa., Oct. 9, 1883.

I have for a long time been aware that honey would often keep clear and limpid until it got a little start in candying, and then it would go all at once; and I have also seen a little candied honey start a big lot, just as you say. Thank you for the important items you have given us.

HOW THE DROUGHT AFFECTS THE BEES.

One of the N. Y. *Tribune's* reporters interviewed an old farmer in regard to bee-keeping. Here is what he was told:

"They've done nothin' but loaf round the hives or fight an' rob their neighbors for the past two months. And they're as ugly and hateful as all tarnation. We dassent touch a skip to take out any honey, 'cause the robbers 'll be out in a jiffy, and they'll fight and kill each other by the hundred. Do you see that little critter there buzzin' round that hive? Well, that's an Italian, and he's a robber. And there comes a Cyprian bee too. Both mean mischief. They can whip the native bee any time in a fair stand-up fight. They're constantly robbing the native bee, but a good many get killed for their pains.

"Why are they robbin' of each other? It's 'cause they've nothing else to do. When flowers is plenty you don't see much of such work. Then they're hummin' and singin' round and as happy and contented as an oyster, but now the mischief's to pay with 'em. Take that, will you!" and the man struck down a Cyprian that was buzzing and dipping around in front of a hive and threatening to enter at the first opportunity.

"There's a weak swarm in that there hive that I guess I'll have to stick a match under to save it. Queer, an't it? Killin' 'em to save 'em! But it's got to be did. 'Twon't pay to keep 'em and feed 'em fifteen or twenty pounds of honey this winter, and then mebbe not pull 'em through to spring. There's several sich colonies. They swarmed late, and some on 'em haven't made a pound of honey since. They made a mighty poor beginnin' in the world, and might better never sot up housekeepin' on their own hook at all."

FRIEND MALONE'S REPORT FOR 1883.

Bee-keepers generally say this has been a bad season for bees; but I can't see it in that light. My bees have done well for me, with the exception of five swarms that I ran for comb honey; 20 that I extracted from have given me 2200 lbs., and have in the hive, ready to take, I think at least 1000 lbs. more. Every thing is killed by frost, and I am a little afraid to extract till it gets colder. Lots of my bee-friends come and buy honey from me, and want to know why it is that I can get honey when they can't. I tell them that it is the Cyprian-Italian that is the coming bee, and some of them begin to believe what I tell them now, though they used to tell me that I had the bee-fever, and would believe just as much as they wanted to. The five that I ran for comb honey nearly failed; the five best I ran for increase, and increased 17; this makes 47 (I will sell 20 if I can). I have adopted a plan for wintering, and have succeeded well so far; and if I succeed as well for three more winters, then I shall begin to think I can winter bees.

COMB AND COMB-BUILDING.

One thing I learned this season that I have never heard mentioned in the bee-journals, and that is, how the bees get the wax to build their comb. I had a swarm working in a 1½-story Langstroth hive, with a honey-board and the old-fashioned boxes on with glass in one side. I put starters of comb in the boxes, and the bees went to work. When they got the box nearly full I took considerable time watching them work. I have a magnifying-glass that draws the bee as large as my thumb. This gave me a good chance to see what they were doing, and how they did it. I could see the field bee give his load of honey to the young bee, and could see bee No. 1 go to bee No. 2, and with his head he would raise No. 2 up and get his load of wax, then hurry back to his place on the comb, and pass on his load of wax to the cells. I saw the comb-builder go to four different bees before he got his load of wax. The last one he went to, he seemed to get mad, and tried to sting him. No. 4 curled up, then straightened out, and No. 1 got his load. I feel pretty sure that drones build comb, and what I saw in one of those boxes that had drone comb in compels me to say at least they help. I know that comb-building by drones is denied by our best apiarians; but if the drones were watched closely, they would get more credit, I think, than they generally do. At some future time I may explain what I saw. Tell me if you ever saw bees get the wax in the way I have mentioned. Please tell, if you can, whether the black bees can make whiter comb than the Italians, or not, when working from the same flowers. I can't see any difference in color, but I can see a big difference in the amount of honey gathered, in favor of Italians.

Oakley, Ia., Oct. 8, 1883. **WM. MALONE.**

Our readers will remember friend M. as the one who gave us the wonderful report about a year ago. We are very glad to know that he continues to be successful.—In regard to the comb-building, and the part the drones have to do with it, I believe we shall have to decide pretty generally that friend M. is mistaken. He saw the bees go around for wax to other bees, without doubt; but if he intends to carry the idea that this wax was carried in from the fields, he is surely mistaken, we think. The wax scales which exude from between the rings of the body are, without question, the source from which wax is obtained; and if he will again look with his magnifying-glass he will see them picking for these scales. Pollen is often taken from the legs of field bees as soon as they bring it in, and doubtless he has got the two things mixed. Friend Carroll has declared that drones assist in comb-building; but until older and more careful observers shall be able to see something of that sort, I presume we shall have to think they are mistaken. No offense intended toward friends M. and C.; but drones have been very carefully studied by those who have made it almost the business of a lifetime, and the general decision is, that they do no work of any sort whatever. They are simply drones, and nothing but drones.—I believe it is generally agreed that black bees do make whiter comb honey than the Italians; but it is also agreed that the reason is, that the black bees cap the cells of honey before they are quite full, while the Italians fill the cells completely full, making a solid tight job of it. The unfilled cells look whiter on account of the air-space between the caps and the honey.

SOME FACTS (?) ABOUT BEES.

Here are two facts I have seen nothing like about bees. A reliable neighbor tells me, that last spring a swarm of bees passed over him; he and another man gave chase, and soon saw them approach and join an immense cluster of bees on a tree. They cut the tree and divided them, putting them indiscriminately into three empty hives, which they filled to overflowing. Next day there were found to be more bees than could work in the three hives, and two other hives were filled, making five, and they were taken indiscriminately, without regard to queens, and all five did well. No brood or comb was supplied any of them at any time. There was an old gentleman with 50 or 60 hives near by, who for years has given them no attention, letting them swarm and go to the woods when they liked. He is near 80, and without help. I suppose some dozen swarms had settled there with their queens.

BEES AMONG THE LIMBS OF A TREE, WITHOUT A HIVE.

Last Dec. a young man was in the woods hunting. Observing something peculiar in a scrubby tree, he examined it and found it was honey-comb securely built among the limbs and vines. He cut it down and got a fine chunk of nicely capped honey. The bees were an immense swarm, and he is of opinion they would have wintered there with no protection but their comb. **J. H. BURROW.**

Lynnville, Tenn., Oct. 9, 1883.

Friend B., no doubt your neighbor who tells you the first fact is reliable; but either he or somebody else has made a mistake, I should say. Five swarms might easily cluster together; but when they come to be divided, without finding the queens, and a queen happened to get into each of the five divisions, it would be something quite improbable, if not impossible. Your other fact is nothing particularly new, and the bees might possibly have wintered, provided they were very strong, and had an abundance of honey.

HOW TO GET COMBS BUILT CLEAR DOWN TO THE BOTTOM-BAR.

I have thought a good many times, that if the bees would build their combs down to the bottom-bar it would make it much more solid in the frame, and would therefore be much better for extracting. Well, I have found out how to take advantage of them, just a little, by putting the foundation down to the bottom-bar, and leaving the space above; and as they don't seem to like the idea of having the space left above, they go to work and build up, and so hereafter I shall put all my fdn. in, in that way. I also want to say a word with regard to new swarms leaving their hives. Some who have given their experience claim that a new swarm will not leave, if given eggs and uncapped brood, and others that this will cause them to leave. Now, I claim that there will be exceptions to both these rules. I think in most cases, if eggs and uncapped brood are given them, they will remain and go to work satisfied. This has been my experience for the last eight years. I do not think the brood and eggs will cause them to leave; but they have in all probability selected a new home, and have made up their mind to emigrate to it. I had a case this past summer, somewhat analogous, and will, I think, throw some light on the subject. I prepared a double hive in the spring, and put two good colonies into it with perforated tin between them, to experiment a little in regard to heat. The bees could pass from one end of the hive to the other, at the top of the frames and under the cloth. They worked along very nicely, each in their own end of the hive, until one colony lost their queen, and then raised another; but she was lost; and by this time they had no eggs to raise another, and their brood soon all hatched out; and before I was aware of it they had gone into the other end of the hive, which led me to the conclusion that, if I had given them eggs, or, at least, eggs and uncapped brood, they would have remained in their own end of the hive. Now, as a *rule* I think it is the safest plan to give them eggs and uncapped brood. This has always been my custom, and I have never had a new swarm leave; and I shall continue it until, by actual demonstration, I find them leaving on account of the eggs and brood. G. T. WILLIS.

Hoopeston, Ill., Oct. 2, 1883.

Friend W., if you put sheets of fdn. right down against the bottom-bar, without having the frames wired, I should think you would have bulging of the combs. May be, however, you have improved so much on our fdn. of late that it will answer to fill frames close to the bottom-bar without wires. How is it?—Two colonies of bees can be kept in one hive, provided it has a pretty wide entrance, and brood is kept in each side to hold the two clusters separate. It seems to me it is well settled that brood holds bees where they won't stay without it.

FROM AN A B C SCHOLAR.

I have handled bees since March, 1882. I bought 4 stands in old box hives, and transferred to Langstroth frames. I use full sheets of fdn., and increased to 16 stands by dividing; raised 12 queens, and lost but one in fertilizing. The year 1882 was a poor season in Southern Ohio, and my surplus was but 100 lbs. One thing I learned in building up nuclei; and that is, not to give them fdn. too fast, unless the flow of honey will keep them booming. When winter came I had an average of 6 frames to the stand, well filled, spreading the combs so as to leave two spaces in center, at least; cut passages in combs; put in division-boards, and packed with chaff; placed 3 strips, ½ x ½ inch, across top-frames; used two thicknesses of outside coffee-sack for cover; put on plenty of chaff; placed on the cap, which extends down to the bottom of the stand, making a double-walled hive. I left them on their summer stand, packed, till apple bloom; came through the winter without loss; built them up to nine frames each; increased to 44 by natural swarming. I have taken 750 lbs. of comb honey and 200 lbs. extracted; sold at an average of 16 cents per lb. My bees are blacks and hybrids, and the comb honey is much nicer than that made by the pure Italians. I used the

SHEPARD SWARMING-BOX.

I can hive with it in two minutes. Give them one sheet of brood; put it in the shade, and no absconding. If two or more swarms cluster together, place a newspaper down in front of the hive; shake out the bees, and catch all queens as they go in. If you fail the first time, continue until you get them all. Then divide the bees; give them a little smoke to drive them in; give each stand a queen. This never failed with me this season, and I lost no queens. My honey report would have been better by one or two hundred pounds, if I could have had supers when I needed them. I would advise every one to read up on apiculture, even if he has but one stand. Box hives did not give 5 lbs. of surplus.

Ripley, O., Oct., 1883. MASON GRIFFITH.

THE HONEY SEASON IN WESTERN VERMONT.

It has been better than an average, with some peculiarities. Honey began to come in in appreciable quantities by June 5th, from raspberry. White clover was in blossom before locust, and whilst raspberry was still in bloom. Basswood lasted from July 12th to 25th; and in sections where there was plenty of smooth sumac, honey came in quite plentifully till Aug. 1st. The season was wet and cold, and bees were kept at home much of the time by rain. There was hardly enough fall honey to keep up brood-rearing; and although buckwheat was plentiful here, there was no honey in it. My colonies averaged 152 lbs. of comb honey, in one and two pound sections, spring count. Swarms have more than doubled. The box-hive men are out of luck as usual. Bees swarmed so much they would not work in boxes, and their only chance for honey is the brimstone pit.

BLACKS AND ITALIANS.

My experience with black bees is different from the "Banner Apiary" man. He says, that in a poor season the Italians will gather the most honey; leaving it to be inferred, that in a good season they will not. This season was excellent, while it lasted, and I know of Italians and blacks side by side, and subject to the same conditions, where the former stored more than 2 lbs. of honey where the latter stored one, and comb honey at that. I have had several cases where Italian swarms had lost their queen, and had filled the brood-chamber two-thirds full of honey before I noticed their condition. I gave them laying queens, and put on plenty of clamps filled with empty sections, and they carried nearly all their honey above. I never had any trouble about Italians working in supers where there was a young laying queen below.

Fairhaven, Vt., Oct. 15, 1883. W. H. PROCTOR.

REPORT FOR 1883; 50 GALLONS OF ASTER HONEY.

I commenced with 24 L. hives, 2-story, half in fine fix. Apples bloomed in March; warm and nice; scattered brood, which was then on from 3 to 8 combs. Turned suddenly cold; chilled brood, and stopped flow of honey. I fed some the 1st of May; found hives weaker in bees and brood than the 1st of March. Then came poplar, which was fine, but no bees to gather it; got about 500 lbs., which ought to read 5000, if I had fed properly, since when bees have got only enough to rear brood. Now aster is on us in all its glory. The pastures everywhere look like snowbanks, and the bees are booming. I extracted 50 gallons of honey last week, and they are now ready to extract again. If frost remains off ten days, we shall get an immense yield. I am like the negro who planted a peck of potatoes, and raised a peck. "Bress de Lord, got what me started wid!" 24 hives, not a single swarm. They are rousing good ones. J. H. BURROW.

Lynnville, Tenn.

$27.00 PER COLONY FROM AN APIARY OF 5.

I commenced the season with five colonies of bees; have increased to 15, and taken off 400 lbs. of honey. I have sold down to five colonies again. My increase brought me $65.00; my honey sold at an average of 17½ cents, or $70.00, making $135 for five swarms of bees, or $27.00 per colony — not a *big* report, but one I am satisfied with. Of course, this is not net profit, for the hives, sections, and fdn., are to come out of this.

INTRODUCING TO A COLONY THAT HAD A QUEEN.

I had a colony queenless, as I supposed. As I wanted to introduce a queen, I took the precaution to give them a frame of eggs and hatching larvæ; they started queen-cells immediately. Thinking that was evidence enough that they were queenless, I tried to introduce a queen after she had been caged in the hive 48 hours. I released her, and she was immediately balled. I then caged her 12 hours longer. This time the bees seemed to accept her. I looked her up in half an hour, and found her running over the comb all right; and the bees not offering to molest her, I looked again in an hour, and she was still all right. I then went to my day's work. When I came home at night I found her balled on the bottom-board. I again caged her for 24 hours. When I let her out the bees did not molest her; but 20 minutes afterward I found her balled; and in looking her up this time I found the largest queen I ever saw; so, of course, that put an end to my introducing a queen to *that* swarm. Now, I had a queen-cell hatch in that hive about two weeks before this; and about a week before, I looked the hive over thoroughly at three different times, and could find no queen, so I supposed she was lost on her wedding flight; but to make a sure thing of it I put in the frame of brood with the above result. Now, is this an exception to the rule, or do you occasionally hear of such cases? I should like to know more about this; for in this instance it nearly cost me one of Doolittle's best queens. H. H. PEASE.

Kingsville, O., Oct., 1883.

Friend P., your report is a very fair one.— I have several times had trouble in introducing queens, just about such as you describe; and a careful search has almost invariably resulted in finding a queen of some sort present. You did not tell us whether your large queen commenced laying or no, although we presume she did. It was probably a case of retarded fertilization, so that the bees likely started queen-cells because their queen was so long in getting down to business. It may be, however, that this large queen got in by accident, and belonged to some other hive. I should suppose that she had just got ready to lay when you found her, and she may have been quite small and inferior looking when you first hunted the hive over for her, which would account for your not finding her when first looking.

UPWARD VENTILATION.

I bought two swarms of bees last fall in the old American hives; packed them in boxes with about three or four inches of chips from the planer, all around, except the bottom; kept the entrance-way open so they could go out and in when they pleased, the top-bars being tight, and the places for the bees to enter the surplus boxes having a board nailed over them, and every thing all glued down tight. After reading about upward ventilation, I watched them closely. All I did to them was to keep the entrance-way open. I found, by using the searching-rod, there were no dead bees, and they were growing stronger. Early in the winter and in spring they were strong, and I got through swarming before my neighbors began, who packed after the modern plan. Now, if it is a fair question, why did my bees do so much better than theirs, if upward ventilation is necessary? I. B. WHITON.

Ithaca, Mich., Oct., 1883.

Friend W., if you will excuse me, I would suggest that the reason why your bees wintered so well with all upward ventilation closed in the manner you mention, is because the American hives, as I know them, are so full of cracks and crevices that the bees had abundant ventilation after you had covered the places where they got into the surplus boxes. The hive has a movable side, which leaves an open crack at two corners, and the entrance is usually quite large, so your planer-shaving packing was just about the thing, under the circumstances.

DOG-FENNEL AND BITTER HONEY.

Bees have not done extra well this season in this locality. We have had a very dry summer; but a few rains in September brought out the bloom on many wild flowers, and these bid fair to give us a good flow of fall honey. The vacant lots and roadsides are covered with a yellow flower, very similar in general appearance to what is commonly called "dog-fennel" in the Northern States. It produces bitter honey.

THE MACARTNEY ROSE, AND A QUEER IDEA IN REGARD TO IT.

Can not some of the friends tell us more about the single white Macartney rose (*Rosa bracteata*)? In "Gardening for the South," the author, after recommending it for a hedge, says: "I see but one objection to it. It is in summer always in bloom, and therefore attracts all the bees in the neighborhood. In my fruit-garden I have thought that the injury done to peaches and grapes by wasps and bees has been much greater since the hedge has grown up than before. It is a fine honey-plant." Think of the objection, from a bee-man's standpoint! After working with bees in this State for several years, I am satisfied there are two native varieties — the black and the brown. My best colony is a cross between the brown and Italian — a large and gentle bee, and very active. W. S. GEROW.

Little Rock, Ark., Oct. 15, 1883.

Friend G., we should think the author of "Gardening for the South" ought to extend his knowledge a little more; or, at least, it would have been well for him to have submitted the proof of his work to some intelligent apiarist before sending it out to the world. The idea that a flowering plant in the vicinity of an orchard or fruit-garden would make the bees worse is ridiculous. It might attract bee-men to establish apiaries; and then if bees did molest fruit, they might be troublesome in the fall of the year. Can anybody tell us any thing more about this "fine bee-plant"?

NUMBER OF BEES IN A POUND.

To-day, while preparing my bees for winter, I had occasion to shake two or three combs of beautiful Italians on to their alighting-board. The morning had been cool, but the sun was then shining warm; and as they were in no hurry to get back into their hive, I thought it would be a good time to find how many bees it takes to weigh a pound. I weighed a little cage, and then picked it up and put into it 120 bees to get half an ounce by my letter-scales, which would be 3840 to the pound. As these bees were not as full of honey as they would be in the honey season, it probably would take quite a few less to weigh a pound then—perhaps about 3500. S. C. PERRY.

Portland, Ionia Co., Mich., Oct. 10, 1883.

In our price list we give the number of bees to the pound at 4000, which is not far from the figures as given above.

REPORT FROM A HOUSE APIARY, ETC.

The queen you sent me is a beauty, and also her young, as they make their appearance. They have white, hairy backs, and three red bands and three white. She was at liberty in the hive Aug. 5; began laying the 17th, and her bees are flying to-day, Sept. 4. My bees were all blacks this summer, and have done well. I have taken over 100 lbs. from some of the swarms. I swarm artificially all of my bees that are strong enough in season, and extract their honey from the top hive as fast as they want room.

My bees are in a house, packed in sawdust, winter and summer. They are all in one row, 21 in number. The house is double-walled. I handle them from the inside. I have tin doors, so that I can sun or shade them as I like. A. J. THAYER.

Blodgett's Mills, N. Y.

HOW I WINTER MY BEES.

I thought my way the past two years of wintering might perhaps interest some of your many readers enough to try it. I build a wall six feet high of plank, east and west; set my hives 6 inches apart, facing south; then set posts in front 6 inches from hives; then take a plank wide enough to extend from hives to posts six inches above entrance; then plank up like first wall, making one side a foot or fifteen inches higher than the other; then fill in with chaff to cover hives; then shed over, to keep out rain, etc. Leave a small space of entrance open, that the bees may have a fly every warm day, as that is the main thing in keeping healthy bees. I have wintered two years in this way, and have not lost a single stand. The only objection is in moving to summer stands, as bees will go back to where they were wintered.

This has been the poorest honey season for many. We have had no rain for six weeks, and but little fall bloom. I have 27 stands from 8, spring count, but am afraid they will be short of supplies to winter on, and it looks useless to pay 10 cts. for sugar to feed, and sell honey at 12½. Friend Root, how would it do to set syrup out in day time, and let them all fare alike? C. L. GOUGH.

Rock Spring, Mo., Sept. 28, 1883.

I think, friend G., you would not be so badly off as you suggest, in selling honey at 12½ cts., and buying sugar at 10 cts. If your sugar costs you 10 cts., good thick syrup — thicker even than the honey, will cost you only about 8 cents, and a pound of the sugar syrup is worth quite a little more than a pound of honey. Feeding syrup in the open air is often done, but it does not answer very well for preparing bees for winter, because the strongest colonies, that need it least, will probably get the most; and the weak ones, that need it most, will get but little. Besides, unless one is pretty well posted he would be likely to have a big job of robbing on hand.

ARE BEES CANNIBALS?

Yes, sir, Mr. Editor, sometimes. I have had two or three cases this season, where both eggs and larvæ were eaten up. The last one was so striking that I will try to give you an account of it. After reading Mrs. Harrison's article about toy bee-hives I went and made one of an old cigar-box and two sections. Now, these sections contained comb and honey in plenty, and the bees which I put in were never without plenty of honey. I stocked it with young Italians, and a virgin queen just hatched. In about two weeks, as she did not lay I inserted a piece of comb with eggs and just hatched larvæ. These were all gone in two or three days, and I gave them another piece, with larvæ in all stages, from the egg to those just ready to hatch. In about three days I investigated, with the same result as before. As the queen was nearly three weeks old, and did not lay, I concluded she was "no good," and pinched her head. In a day or two they were given a cell; and when their queen was a week old I gave them some more larvæ. Do you suppose those old cannibals had reformed? Not a bit of it. They sucked the life blood from their embryo sisters, with no more compunction than a saloon-keeper has when he ministers to the "depraved appetite" he has created, and thus sucks the life blood from the laborer's poor wife and children. CHALON FOWLS.

Oberlin, O., Oct. 23, 1883.

Well, friend F., your experiment is such a "clincher" I do not know but that we shall have to give in; and yet it seems to me they would have taken to the brood, and reared young bees, were it not that you put them in so small a hive; for I have oftentimes thought that small clusters are more disposed to play such foolish tricks. And by the way, friend F., I think if you had put that queen into a full colony she probably would have laid all right. Did none of your little hives work any better?

FROM 37 TO 90, AND 3015 LBS. OF HONEY.

This, my first report in bee culture, I send for publication in your excellent journal. I went into winter quarters on summer stands in 1882, with 40 colonies in Simplicity hives. Came out May, 1883, with 37; 21 of said number I ran for honey; 16 culls were run for increase of stock. Extracted, during the season, 3015 lbs.; comb honey in 1-lb. sections, 300 lbs. Total for season of 1883, 3315 lbs., or a little over 157 lbs. per colony — 5-6 of total amount white-clover honey, and gilt edge at that. I used 10 lbs. of comb fdn.; increased to 90. My stock built out 500 new frames full of comb. Reduction by sales and culls places my stock now for winter at 75 colonies. Fall yield of honey is a total failure in our section; cause, drought. W. A. HUNT.

Lynnville, Ind., Oct. 20, 1883.

BAD NEWS FROM FRIEND KENNEDY.

On the evening of the 20th, my dwelling-house, honey-house, work-shop, 30 stands of bees, all of this year's crop of honey, 3500 lbs., and all of my tools and fixtures, were consumed by fire. My bees were on the south of the honey-house, and the wind was from the north, and the heat so intense that the poor little fellows could not be moved, so they perished right where they sat. I was not at home, and didn't get there until all was burned up that could burn. The fire originated in the honey-house, and from that to my dwelling. I have 50 stands left in good fix for winter. I have no honey to eat this winter. I have none to sell either.

GEO. W. KENNEDY.

Carrollton, Mo., Sept. 29, 1883.

Friend K., I read your card all through anxiously, to see if you made any mention of insurance. Every bee-keeper should use all possible means of protection against losses by fire; and after having done that he should surely have his property insured. Better sell off a part so as to keep the rest insured, rather than to take the risk of losing the accumulations of years in just a few minutes' time. Reports of fires from bee-men are quite frequent.

A GOOD REPORT FROM THE CONTROLLABLE HIVE, ETC.

I am now going to tell you my luck with bees during the summer. My health was very poor in the spring — so much so that I sold my bees down to 12 swarms. I have increased to 40; 3 left for the woods, 6 went into 3 hives, and I have 40 good heavy swarms to winter — all Italians but 3. I have sold 600 lbs. box honey, and have a little over 400 lbs. on hand. Last spring I received a circular from Mrs. Cotton, of Maine. I see in GLEANINGS you have heard of her and her Controllable hive, so I sent and got one, and then I made 2 more like it. I put bees in them June 15th, 19th, and 21st. Now guess how much honey I have got from the 3 swarms. I got 424 lbs. and one large swarm. It is as good a swarm to winter as I have got. You see, I get almost as much from the 3 Controllable hives as I did from all the rest of my bees. How it is, I don't know; but I never saw bees work so in my life. The hives are large; the boxes in each hive hold 120 lbs. I am going to make a number of Controllable hives this winter, and try them another season; and if they prove as good as they did this year, I shall adopt them altogether.

D. L. LOVEJOY.

Martinsburgh, N. Y., Oct. 7, 1883.

MY REPORT.

A year or two ago I caught the bee-fever, and it gradually grew worse until last June, when we bought two colonies of pure Italian bees, an extractor, a honey-knife, smoker, bee-veil, A B C, some empty hives, etc., and commenced bee-keeping in reality. They cost $34.00 in all. Well, I divided one colony and let the other one swarm naturally, to see which is the better way, and I shall let them swarm naturally after this, even if I do occasionally have to chase a swarm half a mile in order to get it. I increased to 7 good strong colonies, and got 130 lbs. of extracted honey, 50 lbs. of white-clover, and 80 lbs. of boneset and goldenrod. All the old bee-keepers say this has been a poor season for bees and honey, as well as for farmers; but our bees have paid for themselves and all the " fixings," and given a profit of $10.00 besides; that is, counting the new swarms at $5.00 each.

HOWARD L. HUTCHINSON.

May, Tuscola Co., Mich., Oct. 18, 1883.

HONEY FROM THE BANANA-BLOSSOM.

I am raising bananas; from the blossoms drops a juice as sweet and thick as honey. Do you not think that and orange-blossoms will be good for bees?

MRS. S. W. KUSTER.

Lenard, Hernando Co., Florida.

From the above it would appear there are a great many plants that yield nectar in such quantities that it drops off. I am sure, my friend, that any plant that yields honey in such quantities would be valuable for bees. We have never had any thing very definite in regard to honey from orange-blossoms. Do they really yield honey, and in quantities enough so that it can be truthfully labeled, " orange-blossom honey "?

BEES IN INDIA.

I send by this mail a paper in which is the first article in bee culture I have seen since coming to India. Literally nothing is done here with bees in a scientific way where so much might be done. Our mission is prosperous; 170 boys and girls in training-school for teachers, and many schools in jungles; 24 baptisms were reported for last month, and I hear of others since.

A. BUNKER.

Toungoo, India, July 18, 1883.

Friend B., we are anxious to see bee culture make its way in India, but it is a thousand times more important that the work of spreading the gospel be carried on. May God bless and sustain you in your arduous task, and we shall be sure that bee culture will make its way when Christianity reigns.

AN OLD SWARM OF BEES.

The following comes from the Birmingham (O.), *Press*:

> It may interest the readers of the *Press* to know that there is a swarm of bees in Florence tp. that is 40 years old. Hiram Knapp says, 38 years ago he built a house for his bees, and placed them in it, giving them room to spread out as much as they pleased. This one was two years old when put in the house. Three other swarms were put in at the same time, but they died out years ago. Mr. Knapp's son-in-law, Geo. Taylor, now occupies the farm, and a few days ago had the bees transferred to a Root chaff hive. They had about three bushels of comb, much of it filled with honey and brood in all stages. The old hive, which is of the common box kind, was completely filled and surrounded with comb in all ages, from forty years down to one, some of it very tough and hard. The bees had bred in it so long that they had become dwarfed, not being much more than one-half as large as bees generally are. They now have a new lease of life, and a chance to work the modern way, and place the surplus product in marketable shape, in the popular one-pound section.
>
> If any readers of the *Press* know of an older swarm, please report.
>
> E. M. GRAVES.
>
> Birmingham, O., May 20, 1883.

STARTING A BEE-KEEPERS' SOCIETY.

There is one thing I should like to ask you about, and that is in regard to starting a bee-keepers' society. The bee-keepers of this county have long felt the need of a society; but bee-keeping being in its infancy, there is no one far enough advanced to know how to start such a society; so with that object in view, I write you for a little advice. What we want to know is, what to do and how to do it; or, in other words, we want the whole thing in a nutshell, as it were.

CHAS. H. WARING.

Saratoga, N. Y., Oct. 20, 1883.

Friend W., I would gladly give you the information you desire, but I am not very much posted in regard to conventions, and therefore I would request Prof. Cook and C. C. Miller to answer your question. Friends Cook and Miller, please give us a good article on the above subject, each of you. Make it so plain that even the juveniles will know just what to do to start a bee-keepers' convention.

DANGER OF CLIPPING QUEENS' WINGS.

On June 30, Mr. T. J. Lewis sent with me to you for a $1.00 queen, which was received in due time, and introduced according to instruction. On the eighth day after introducing her, in looking through her hive we discovered queen-cells, and he, fearing they would swarm, had me clip her wing, which I did, holding her by one wing while I clipped the other. I was very careful, and am sure I did not hurt her, but she has never laid an egg since.

Tank, Mo., Aug. 31, 1883. T. A. Wright.

Friend W., although you do not say that the queen had been laying before her wing was clipped, we infer she had. As this is the first case of the kind I have ever heard of, I can hardly think there is much danger of spoiling the queen that way, by clipping her wings. It is well known, that a sudden disturbance often results in depriving a queen of the power of laying, and we have given many reports of queens that would not lay after having been shipped. This very fact has led to many uncharitable and unkind thoughts and feelings. For instance, a man who receives a queen and introduces her, and finds she does not lay an egg, will say the shipper sent him a bad queen, and he "didn't believe she ever did lay," while the fact is, the disturbance of taking her from the hive, and sending her away, was what caused it. Neighbor H. once removed a queen of great fertility from one of his hives; but after carrying her to his other apiary, three or four miles distant, and introducing her, she never laid afterward. I must say, friend W., however, that I agree with you insomuch as to prefer queens without being clipped.

THE REASON WHY FRIEND POST DID NOT NEED ANY OUTFIT.

I built me a bee-house last fall, a year ago, to winter my bees, and did not get it done till a late hour, and ceiled it up inside and out with matched lumber, and rushed my bees in before I had it ventilated. I thought I could throw the doors open nights to ventilate it sufficiently in that way, and I neglected to do so, and there came a thunder-shower in the winter, and the bees smothered, almost all. I had only 12 colonies left, and they were very weak. Benj. Post.

Caro, Mich., Oct. 17, 1883.

Friend P., if you did have bad luck, yet you have furnished a timely caution for others who might otherwise be tempted to do as you did. Look out about letting things go by, thinking you will keep watch of them. It pays to take care of bees in season, and to do your work well, so far as you go.

REPORT FROM CORONACA APIARY.

As I have seen no report from this section, I will tell you how bees have done this year. Many, if they would express themselves, would, I fear, be placed in Blasted Hopes. Upon the whole, it has been the poorest year for honey that I have seen since I commenced bee-keeping. I have had but few swarms during the season, and will go into winter quarters with about 33 colonies. They will perhaps have honey enough to carry them through, by taking from the stronger and giving to the weaker, but will have no surplus. The pea crop was a perfect failure, consequently did not gather any fall honey, except from goldenrod and asters, and it was very dry, even for them. I have taken about 800 lbs. of extracted honey from twenty colonies, and sold nearly $100 worth of queens, which will keep me out of Blasted Hopes; but if I had worked for section honey, I should have been there for certain, for I had about 10 colonies working for comb honey, and did not get more than 50 lbs. This is not only the poorest year for honey, but the most unprosperous farming year we have ever known in this section — worse even than 1881, and I believe the entire State has made a worse failure than in 1881.

HONEY FROM COTTON.

You ask me if bees work on cotton every year. I answer that they do, if it is dry during the height of cotton bloom; but if wet and seasonable, I would say no, as the bloom lasts only a day, and the plant does not bloom rapidly, or in rapid succession, with a vigorous growth in it. Ragweed is our pollen-plant for Aug. and Sept. I think it equal to buckwheat in that respect, and I think that is all that buckwheat has ever proved fit for here.

Coronaca, S. C., Sept. 25, 1883. J. D. Fooshe.

UNSEALED BROOD FOR HOLDING SWARMS, AGAIN.

I have just been reading what Doolittle and others have to say about giving new swarms unsealed brood to hold them. This remedy may vary in different localities, and under different circumstances; but as a general rule it has proved successful with me. Before I commenced this practice, a swarm would leave every little while; but since I have followed this plan I have had but one or two swarms desert and leave the brood. I have hived some 25 or 30 swarms this year, invariably giving them a frame of unsealed brood, without losing a swarm. Of course, other preventions, such as plenty of ventilation and shade, are necessary.

PREVENTION OF SWARMING.

I had several first swarms throw off swarms after filling their hives, which was against the rules, as I wanted honey and not bees, so I set about trying to stop such nonsense, and succeeded by raising the front of the hive the thickness of a lath, or more, if very warm; after that I had no more swarming, and they went to work instead of lying out in front of the hives. Of course, this can't be done with tight bottom-boards. Bees did well here after the first of June, until the middle of July, in spite of rain and cold nights. Since then we have had very little rain. S. H. Mallory.

Decatur, Mich.

CLOSED-TOP SECTIONS, ETC.

I want no more open-top sections, but will take all in closed-top for my use, as I find bees fill a single tier much sooner, and then when removed they are whiter than when more tiers are used. The lower ones get dark. My boy and I can care for 100 colonies of bees, even if I am a cripple. I lost a leg in the army in 1861; so when the bees sting my wooden leg, why, they get fooled, don't they? We have 92 swarms now. I think I shall unite some — probably put them down to 70 or 75. The glass buckets are fine, and sell readily when filled and labeled, and when not any comb honey can be had. I am selling them filled at 20 cts. **Wm. St. Martz.**

Martinsville, Ill., Oct. 4, 1883.

$119.75 FROM 3 SWARMS IN ONE SEASON.

Bees in this locality are doing well. I commenced the spring with 3 swarms, and from them have got 12 good swarms, and have taken 93 lbs. box honey, and will have probably 150 lbs. more. I sell my honey at 25c per lb. That would make 243 lbs.; and at 25c would be $59.85. The bees could be sold at $5.00 per swarm, which would make for the twelve new swarms, $60.00, and would sum up for the twelve new swarms, and honey taken from them, $119.75. Isn't that pretty good for a beginner?

Loyal, Wis. **L. Allen.**

TAKING AWAY THE HONEY, AND GIVING THEM SUGAR SYRUP.

Wishing to try the experiment of wintering a few colonies on sugar, and finding a way of filling empty combs with syrup, I wish to ask you if it will answer to remove the frames containing honey after all the brood is hatched, say the last of October, and substitute combs filled with sugar syrup.

L. L. Crittenden.

Benton Harbor, Mich., Sept. 29, 1883.

I have known some to succeed, friend C., in doing just what you propose; but for all that, I should be a little backward in advising such a course. Why not let them have their sealed honey, and throw out only the unsealed? then if they require feed, give them thick sugar syrup.

A GOOD REPORT FROM THE PELHAM FDN. MILL.

I got a mill from Mr. Pelham the other day, and we had quite a time making fdn., I tell you. It is the first mill I ever saw, and I did not know anything about working it; but for all that, I made some comb, and gave some to the bees, and you ought to see it now. They went to work at it right off, and now it is as fine comb as a natural one. I like the mill, and think it is just as good as the mill that costs 25 or 30 dollars.

HONEY, HONEY.

I took a crate of honey off to-day. I thought it was all capped over, and it was next to the glass; but inside, all through, some cells were not capped over at all, and others were capped nicely. It is funny, any way. Who can tell me the cause?

I had 8 black swarms, and I bought two Italian nuclei, 4 frames. Well, I have 25 blacks and 6 Italians; how is that for high? Six swarms from two 4-frame nuclei. It is so dry this summer, I think honey will be scarce.

SWARMS GOING OFF WITHOUT CLUSTERING.

I am sure this time. One swarm was out; and before I got them in, another started, and I said, "Look out, or they will cluster together;" but, away they went. We threw dirt and water, and drummed, and they would not stop. So I said, "Let them go." **Francis C. Smith.**

Kilmanagh, Mich., Aug. 31, 1883.

No doubt the bees will work the fdn. as well as any, friend S., but will it not take more wax to make a certain number of sheets? If I am correct, the Pelham mill can not be made to make very thin fdn.

Blasted Hopes.

Friend Root: — It is with great discouragement that I undertake to write to you, for I am a poor man, and have spent all and more than I ought to have done for my bees, in hopes of a little return. I started in the spring with 7 swarms; bought 11 more; one smothered when bringing home; 2 were robbed, and I increased to 25, and doubled up to 19, and I think I shall double more. I have fed out one barrel of sugar. They have cost $153.90, and I have not had a drop of honey, and there is no prospect of their getting any this fall. Robbing is the order of the day. I have 2 Italians, 6 hybrids, and 9 blacks. The two former defend themselves, but the blacks give up and let them carry off what little stores they have. I wish they were all Italians. If they live through, I shall try them another year; and if they do no better, you must put me in the Growlery. **D. H. Macomber.**

Sweet Home, Lavaca Co., Tex., Oct. 14, 1883.

MARRIED.

Miller — Stokes.—In Medina, at the residence of the bride's father, Oct. 2, 1883, Addie S. Stokes and Frank Miller.

One by one our girls are going,
  Each obeying Cupid's call;
Though for them our tears are flowing,
  Hymen soon will grasp them all.

Toka's gone to be a Miller,—
  Toka, with the golden hair;
Health and happiness we will her,
  With the Miller, Frank and fair.

I presume many of the friends will remember postal cards and letters signed "Toka," and some of the inquisitive ones have wanted to know about Toka, whether it was a lady's name or no. Our friends Addie and Frank both belong to our Young People's Christian Association of Medina, and we have long learned to be pretty sure we shall find them on hand at every young people's prayer-meeting; and, what is better, one or both of them are pretty sure to take a part in the exercises. Well, a year or two ago I noticed that our friend Addie had dropped her usual signature, and adopted the queer one of "Toka." In speaking of it I remarked that they would not know whether it was a man or woman who was writing to them. Her reply was, "Mr. Root, that is exactly what I do not want them to know. If I do my work well, what does it matter to them?" And then I remembered that some of our customers had sometimes written to our girls in a way that was at least questionable, if not impertinent; and Addie, recognizing that one who professes to be a follower of the Savior ought to be careful in word as well as in deed, decided to drop the pretty girlish name of Addie in our correspondence, and thus cut off all chance remarks that might not be just the thing for one to speak to a Christian, or for a Christian to smile at. Now, then, friends, you can see why the sight of that simple name "Toka" brings me a happy feeling, and causes to well up in my heart a "God bless you, Toka"! And may God's blessing continue to rest with you, and with him who is to be your partner in life, for I have learned in years past to love you both.

"Remindery,"

Or Department for duties to be attended to this month.

WHAT TO FEED, AND HOW TO FEED IN NOVEMBER.

I PAID $5.00 for one colony May 31, which swarmed June 1, 11, 12, and 15. Who can beat it? Two of the swarms, however, are very weak (have been robbed), and will have to be fed. Now, Mr. Root, will you be so kind as to tell me what to feed? how much? when and how, to bring them through all right in the spring? I love to see them work.

I have two brothers, aged respectively 13 and 15, who are equally fond of bees.

When I was about 12 years of age I began smoking at school with the other boys, and gradual indulgence stole upon me for eight or nine years, until I smoked from five to fifteen times a day. But I quit on the 26th of last February, and have not smoked since. I shall have to get me a smoker next season. Which do you think is best? A. W. TOBIAS.

Graham, Jeff. Co., Ind., Oct. 22, 1883.

Friend T., one of our neighbors, who is in just about your predicament, came to me yesterday and wanted to know what I would do with late swarms. I told him that, as it was a warm and pleasant day, if I were in his place I would take a tea-kettle feeder and fill it with good thick syrup, say about 20 lbs. of granulated sugar to a gallon of water. As it is so late in the season, I would boil it until the grain is entirely destroyed, and then set the feeder right over the cluster while it is warm as it can be without being unpleasant to handle. If given in this way, the bees will probably empty it all in less than 24 hours. If the weather should be cool, I would put woolen cloths around the sides of the feeder. If you can get them to take it all down to the combs before it gets cold, they will probably cap it over, and it will be managed all right. If the feed gets chilled, and they have to carry it down while it is icy cold, it will probably give them the dysentery. It is rather risky business feeding in November, I know; but yet I have seen it done without any bad results. I should much prefer to have a colony in a chaff hive; but if you can not do that, and you have a dry, warm, dark cellar to put them in, I think I should set them in the cellar. If you feed your bees in the way I have indicated, let us know next spring how they turned out.—I am very glad you have given up tobacco. If you give us your promise to pay us for the smoker if you ever use tobacco in any form again, we will send you one without charge.

UNITING BEES.

Considerable has been written in regard to plans for uniting bees. We unite them by the hundreds, and have no trouble whatever. The colony to be put with another is made queenless, and left several days — not long enough for a queen to hatch out, of course. The combs, bees, and all, are simply lifted out, and set in with any other colony having a laying queen. If it is done during a cool day, it can be managed so as to take all of the bees, or nearly all, at one time. If they go back to the old stand, set in a couple of combs a little way apart, and at night they will all be found clustered between these. If a warm day comes, be sure to close up the old hive, or take it away entirely. If you do not, the bees may cluster on the sides inside, and starve to death. After their old hive is taken away, they will mostly get in where they belong, providing the new colony is near by. If it is not near by, they will scatter around into other stocks to some extent, and a few may be lost. But with Italians you lose very few bees. Once in a while they will commence to quarrel; but you should look at them occasionally, and give them a pretty good smoking whenever they show such a disposition. We have followed this plan right along, and I have not had a colony of bees stung to death this fall. We prefer to do the uniting toward night, when they have stopped flying, when it has been warm enough for them to fly. You can do it without any trouble, if you just keep your eye on them and *make* them unite. Of course, you want to get the stores of both colonies into one. To do this, uncap the combs having a little honey in, and put them at the outside of the cluster. They will usually then take the honey out and carry it to the other combs. After you have got the lower apartment filled, and there are no more combs containing honey, set these in the upper story with the honey uncapped, and they will very soon carry it all below. Have the combs evenly spaced below, and no empty spaces left, or you may have a comb built in the empty space, even in November, if there is much in the combs above, to be carried down. For the first time in years, we have enough natural stores in our apiary to winter as many stocks as we shall try to winter. Now, if we shall succeed with these natural stores, after having failed so many times with granulated sugar, do not say it was because natural stores are better than sugar, but rather because we doubled them up until every colony was a powerful one.

Notes and Queries.

TELL me what kind of a "bird" this is, will you? I found him on the fence holding a live bee at arm's length. There are a good many here.

Oak Hill, N. Y., Aug. 15, 1883. W. W. TURNER.

[Friend B., the insect is the old offender mentioned so many times, and described and illustrated in Cook's Manual, the *Asilus Missouriensis*. The way you describe is just its way of doing with the honey-bees. Whip and drive them off is the only remedy I know of.]

I had 13 hives to commence this spring. I have now 36. I have taken nearly 2400 lbs. honey.

ROBT. SIMPSON.

Kilbride, Ont., Can., Aug. 28, 1883.

SUCCESS AT LAST.

I examined the queen yesterday. She has a nice lot of eggs laid already. I had great trouble in getting her in; had her caged 8 days, but succeeded at last. C. M. HICKS.

Fairview, Md., Aug. 30, 1883.

I took 210 lbs. of honey from one hive this season. They brought 8½ lbs. per day for 16 days running.

J. G. PARTRIDGE.

Newmarket, Ont., Can., Aug. 27, 1883.

I had a fine crop of clover honey, but no fall honey — the first entire failure of fall honey since I have been in the business. I could sell several tons more of extracted and comb honey, if I had it.

Bell Branch, Mich., Oct. 2, 1883. M. H. HUNT.

I have 106 hives of bees; had in spring, 90 hives; have taken 2000 lbs. ext. honey, 1000 lbs. box honey — 3000 in all. The 106 hives have enough to winter on besides. Last season I got, from 80 hives, 5500 lbs.— quite a difference. J. W. UTTER.

Amity, N. Y., Oct. 20, 1883.

WHY QUEENS DON'T LAY.

Your card of the 9th inst., in reply to inquiry concerning a queen that did not lay, was received in due time. Next day I commenced feeding the colony as you directed, and now the queen is laying nicely.

GEO. P. KIME.

Evansburgh, Ohio, Oct. 23, 1883.

HOME-MADE HIVES.*

I employed a carpenter to make ten frame hives last spring (I had only one before). He did not make any two the same size. Some were an inch deeper than others, and some half an inch wider.

JOHN E. HEARD.

Pikeville, Tenn., Sept. 23, 1883.

THE OLD WAY.

My father used to winter his bees in box hives. He used old-fashioned hives, and set them on a plank, clam-shells under the corners. This raised them up about ¾ inch all around. When they were heavy with bees and honey, they came through all right. I think they used more honey then.

Amity, N. Y., Oct. 20, 1883. J. W. UTTER.

FRIEND KLAR'S REPORT.

My bees are in winter quarters on summer stands, in sawdust. Our crop is not a good one in this part of the State. Last year, from 70 colonies, 11,000 lbs.; and this year, from 85 colonies, only a little over 5000 lbs. of extracted honey in all. I go into winter with 90 colonies in good order. Wintered all last year, but united some in the spring.

Pana, Ill., Oct. 1, 1883. A. L. KLAR.

STARTERS OF DRONE COMB.

I have tried using drone starters for the 1-lb. sections to my satisfaction, and don't want any more. The bees contract the cells to worker before capping, and so leave a large space all around the side empty, which never happened with worker. The way I tested them was every other one in the same crate. ABRAHAM KOONTZ.

Crestline, O., Oct., 1883.

I find that experiences are strangely different. Of several queens that mated with black drones, all are inferior but one, and that average. When I open the hybrids' hives they scatter pellmell from their combs like sheep, or else dive right at me. Such bees are not good moth-fighters, and hence are more infested than my pure bloods. I have some Italian drones almost as golden banded as the bees. Other drones from pure queens are nearly black. Is there any preference? A. NORTON.

Gonzales, Cal., Sept. 17, 1883.

BEE-HUNTING.

We have found 13 bee-trees this summer, and have lines for eight more. What trees we have cut will average about 50 lbs. each. We had one swarm last spring, and have ten now. We climb the trees and cut the limb off, and lower it with ropes. The bees are very plentiful here in the woods.

JOHN W. KEYSER.

Wilkesport, Ont., Can., Aug. 1, 1883.

A GOOD FEEDER.

The best feeder that I ever used is a Mason 2-qt. can; instead of the glass lid, cut a piece of perforated tin, large holes, the size of glass lid; fill the can; lay on the tin; screw on rim; take another rim; put it down on top of the frames the same as on a stand. Now take the can; turn it upside down on the rim, and they will empty it in one night. You can put on as many as they need at once. J. W. UTTER.

Amity, N. Y., Oct. 10, 1883.

VALUE OF EMPTY COMBS.

I purchased four of what they call young swarms, and gave them all full frames of old combs, with the exception of a few half full of fdn. Those 4 stocks have filled, and partly sealed over, 50 boxes, making an average of 3¾ lbs. each. They stand in my honey-house, for any one to see. I say to all, take good care of your empty combs. I have your A B C, and find it of use to me. Although I have kept bees for 20 years past, still I may learn. G. HYATT.

Three Mile Bay, N. Y., Aug. 30, 1883.

HONEY FROM SUMAC.

Tell Floyd, of Guilford, Mo., that if he were here he would find no difficulty in determining whether or not sumac yields honey. We have clover after maple, willow, and fruit bloom, but I never expect honey in supers until sumac comes in; then I do get it, if at all. One visit among sumac ought to satisfy any one that honey is there in abundance, and more; the bees use it all day long, early and late. I never in this section saw a honey-bee on a locust flower, and I've tried hard to do so.

Bedford, Pa., Oct. 9, 1883. ED. D. HECKERMAN.

ONE-PIECE SECTIONS.

This is to let you know that I made one-piece sections in 1876. If you would like a machine that will make sections as fast as a boy can pick them up, write me. LAFAYETTE STOUT.

Brighton, Wash. Co., Ia., Oct. 13, 1883.

[To be sure, we should like to know about such a machine, friend Stout; and, by the way, I wish you would send us a sample of that section—not because we care very much about the patented part of it now, but because we want to know all about every thing good.]

HONEY FROM OAK-BALLS, ETC.

Bees have done badly here this year. It has been all I could do to keep their "souls and bodies together." The live-oak balls are in now, so the bees are doing finely.

CYPRIANS DURING A DROUGHT.

I have 240 stands, almost all Italians and Cyprians. The Cyprians have stood the drought the better. I shall go to extracting in a few days. I have over 100 lbs. of wax. Bro. Root, GLEANINGS comes regularly, but I hardly have time to read it till some one wants it. It rained here last March; next in September; next last night, and to-day, but not enough to do any good. R. DEVENPORT.

Richland Springs, Tex., Oct., 1883.

FIVE QUESTIONS BY AN A B C SCHOLAR.

Is pollen consumed by the *old* bees, or by the young larvæ? Can the laying qualities of inferior queens be improved? Do you remove honey-boxes in feeding, during intervals of *no* honey-flow? Will brood be reared in winter, if no pollen is in the hive? Do you think bees will winter more quietly without pollen? H. D. STEWART.

Landisburg, Pa.

[I think pollen is consumed by both old and young bees, when they have unsealed larvæ in the hive, and perhaps to some extent when they have none.—I do not know how you can improve the laying qualities of an inferior queen.—I think I should remove the honey-boxes, if the bees began to need feeding. If you do not, they will often take the honey out of them and carry it below.—As a rule, I do not think that brood-rearing can go forward to any extent at any season of the year without pollen. In the A B C book I have told you of the result of my experiments under glass, or in a cold frame.—I think bees will winter more quietly and more safely without a particle of pollen. When you want them to commence rearing brood, give them combs containing pollen.]

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, NOV. 1, 1883.

Only fear the Lord, and serve him with all your heart. * * But if ye shall still do wickedly, ye shall be consumed.—I. SAM. 12: 24, 25.

WE are rejoicing to-day, Oct. 31, in having on our subscription list 6238 names.

SUBSCRIPTIONS received after this date will be extended until Jan. 1, 1885; that is, you can have it the rest of this year free.

IN the list of members of the N. A. B. K. A., published last month, the name of W. A. Morrison was wrongly printed. His address is Frelighsburg, Quebec, Canada.

HONEY PEAS.

WE have sold a good many of these for seed, but have as yet had no report in regard to their honey-bearing. We are very anxious to know whether they bear honey in the North as they do in the Southern States. You see, the rush of business here prevented our planting until so late the frost nipped them. Who has seen the honey in the honey peas in the North?

IN a recent article on one-piece sections, I mentioned the Hutchings patent, but omitted to state that his patent is on the machine for making sections, and not on the section itself. But, of course, this would cut off all possibility of calling a one-piece section a new thing. His machine cuts the section right from the log, properly scored, and with the ends dovetailed, but leaves no entrance for the bees.

APIS DORSATA AND BEESWAX.

SINCE the article on page 571 was in print, it has occurred to me that, if we can not get the *Apis dorsata* domesticated in the more northern portions of the United States, possibly they might be on the southern line; and if we should fail then in getting honey from them profitably, perhaps we can set them to producing beeswax to relieve the stress on the market, caused by supplying so many fdn. mills; and then if it should so happen that we can not keep *Apis dorsata* here at all, why, we will just send over to the Timorese, and get them into the business of raising beeswax. Do you "catch on"?

THOSE OLD NUMBERS.

BACK numbers have gone off quite lively since our offer of them at 3 cts. a copy. But I think I shall have to make this provision: If you want us to pick out single numbers, we shall have to charge about 10 cts. each. The labor of hunting over old heaps is worth so much more; but if you will take such as we have on hand (no two alike, of course, if you want them so), we will continue to furnish them at 3 cts. each, and we can give you any of them for 11 years back, with but few exceptions. There are a few numbers that we have to buy up at 10 cts. a number, and these we can not furnish at less than 15 cts., and pay postage.

OUR untested queens are all gone, and yet orders are coming in daily; and if this fine weather continues, I fear all the tested ones we have to spare will be gone also. If any one who sees this has any untested queens to spare at this season of the year, we should be glad to have him send them to us at once. Why wouldn't it be a fine idea for some of our friends down South to keep dollar queens ready to ship away, along into the fall months? For that matter, he might have them ready all winter for anybody wanting them. Surely they could do it in Florida. But then, in extremely cold weather they would need to go at the buyer's risk, if they were wanted in our Northern States.

ROOTS OF THE FIGWORT, OR SIMPSON HONEY-PLANT.

WE have a very nice lot of these plants this fall, and they are now growing finely. We can send them safely by mail at the following figures: One root, 5 cents; ten roots, 20 cents; 100, $1.00; 500, $3.25; 1000, $5.00. Now, while I used to think that these were almost sure when planted in the fall or spring, I am at present a little undecided about fall planting. We put out several thousand last fall, but the hard freezing weather threw them out of the ground, the greater part of them. Where they were not transplanted in the fall at all, they started in the spring all right. Perhaps, therfore, you had better not order them until spring; but if you know how to manage them, so the frost will not lift them out, we shall be glad to send them to you now, while we have plenty of time.

THE NEW 7-LB. HONEY-PAIL.

QUITE a trade has sprung up in the Dadant pail we illustrated last month. As they hold about 7 lbs. of honey, they are just right to retail for an even dollar, pail and all. That is, you get 13 cts. per lb. for the honey, pail thrown in. If you wish to sell for about $1.00 at wholesale, for 75 cts. you would get a little more than cost for the pail, and 9 cts. for your honey; and any grocer would be ready to take considerable pains in making a sale if he could make a profit of 25 cts. In smaller quantities, I presume he would be willing to give you 80 cts., or even 85. One hundred empty pails, covers and all, can be easily packed in a good-sized barrel. Price per 100, barrel and all, $9.50.

Later: I have just discovered that the cover of an ordinary 2-quart pail, just fits this pail also, so you can have them with a *raised cover*, slipping *inside the pail*, or the usual Dadant cover slipping *over the pail*, as you choose.

SILK CULTURE.

THE new industry of raising silk right here in our homes seems to be rapidly developing; and in our letters from the bee-friends we hear it mentioned quite often; and it has also been discovered that our common hedge-plant, the osage-orange, furnishes food for the silkworm that seems to answer equally well with the mulberry. Most bee-keepers feel interested in this matter, because it seems to be kindred, as it were, to the study of bees. Our attention has been called to the matter by a neat little pamphlet, entitled "Silk and the Silkworm," by Miss Nellie L. Rossiter, and we have made arrangements with the lady so that we can furnish the little book to our subscribers for 15 cts. per copy. By mail, 16 cents.

KEEPING COMB FOUNDATION OVER WINTER.

THERE seems to be quite a little disagreemet in this matter. Some say if it is kept shut up close in a box, so that the air does not dry out the surface, it is every bit as good as if freshly made. I have told you, also, what our friend D. A. Jones says about annealing it by dipping it in hot water. So far as my experience goes, I have never been able to see any difference, but our fdn. is never left piled around loosely where it can bleach and get dry on the surface. There is one thing pretty certain, any way, and that is, that you can buy fdn. a great deal cheaper now than you will be likely to get it in the spring. Another boom will soon commence on wax, and no one knows how high it will go before next June. Our wax-room is now almost idle, and we shall be glad to fill orders for you, if you want it now.

THE NEW FACTORY.

THE new factory is now entirely occupied, with the exception of the clerks' office. Mr. Gray is fitting this up in nice style, I assure you. The different desks are so arranged as to accommodate about twenty clerks, and each clerk has a place by herself. I say *herself*, for I presume about the only male occupants of the clerks' room will be myself and my stenographer. The book-keeper has two desks, each about 14 feet long, to accommodate the piles of ledgers. The clerk who opens the letters has a desk made expressly for her; and every appliance that we can devise is to be given her to enable her to open, assort, and distribute the letters, without the possibility of a mistake. The mailing clerks have also a nice large desk, and all the requisite machinery to do their work rapidly and correctly. The whole east end of the large room is devoted to files and pigeon-holes for correspondence; and two clerks will be employed during the busy season in keeping in order the files of letters.

ORDERS DURING NOVEMBER.

I TELL you, friends, it is real fun to fill orders now when we have plenty of time to attend to them, and do it easily. Our old friend "Bert," who almost *never* makes a mistake, is now attending to the shipping of all orders, both by freight and express, and it is really refreshing to know that our friends are going to get just what they call for and no mistake. The secret of it is, we have ample time to take things one at a time, and do that right; and to encourage you in giving us orders now, before we are so fearfully crowded again, we make the offer of allowing 5 per cent off on every thing in our price list, from now until you receive your Nov. JUVENILE. We may continue it longer, but do not dare to promise, until we see how much business we have. This discount is in addition to all other discounts mentioned in our price list. Those who are going to sell extractors next year would do well to order them now, so as to take advantage of the low rates of freight, and they would also have them in the spring, just as soon as any customer called for them. To those who keep them and advertise them in their price lists, we offer 25 % off, and the additional 5 % I have just mentioned.

WARMING BY EXHAUST STEAM.

AT present we are rejoicing in a factory warmed entirely by the exhaust, or waste steam from our engine. Instead of spouting the heat and water out into the air, as the old engine has done for the past five years, the steam is now confined, and conducted through a labyrinth of iron pipes to every part of the building, even to all the upper rooms as well as the basement. By a most wonderful mechanical arrangement, after the heat has been taken from the steam to warm the whole large building, the pure water from the condensed steam is carried, by a series of drip-pipes, back to the boiler; so that, instead of feeding the boiler with cold water from the artesian well, we use boiling hot and soft water from the condensed steam. The result is, marvelous as it may seem, an absolute *saving* of fuel, after having warmed the whole establishment. The machinery to accomplish this has cost something over $1000; but I tell you it is refreshing to be able to dispense with stoves and coal-hods and pokers, and have nothing in the way more than the series of iron pipes all around the outside of the building. As the heat costs nothing, any clerk who gets too warm can open his window easier than to turn off the steam, so we have outdoor air almost the year round. One of the compositors has just now raised his window while I am writing, and in comes the sunshine and pure air; and I have thanked God more than once for this beautiful arrangement, and I thank him again to-day for the beautiful sunshine and the bracing air of this 30th day of October.

CONVENTION NOTICES.

THE MICHIGAN CONVENTION.

Dear Mr. Editor:— May I ask you to call special attention to our next annual meeting to be held in Flint, Dec. 6 and 7, of the Michigan Bee-Keepers' Association? We expect to have by far the best meeting ever held in the State. It is expected that the Rev. L. L. Langstroth will be present. To see and hear him will pay any one for the trouble and expense incident to the journey. We also expect D. A. Jones, A. I. Root, C. F. Muth, and hope to have C. C. Miller and T. G. Newman. From what I hear, Michigan bee-keepers are to be out in force. Hotel rates are to be $1.00 a day. Further particulars as to programme will be given soon. We expect to get reduced rates on the railroads. To aid in this, and that I may know how many certificates on railroads to ask for, will every one in this or other States who expects to come, drop me a card at once to that effect?
A. J. COOK, *President*.
Lansing, Mich., Oct. 15, 1883.

BEE-KEEPERS' CIRCULARS

I am fully prepared to execute Circulars and Price Lists in first-class shape. Send for estimates.

GEO. M. GRAY, Medina, O.

DADANT'S HONEY CROP.

Our honey crop being very large, we offer

THIRTY THOUSAND POUNDS OF EXTRACTED HONEY FOR SALE

AT REASONABLE PRICES.

We have both clover and fall honey. Samples sent on receipt of stamps to pay postage. The honey can be delivered in any shape to suit purchasers.

Send 15 cents for our 24-page pamphlet on harvesting, handling, and marketing extracted honey.

DADANT'S FOUNDATION.

From James Heddon, July 27, 1883. "Your fdn. is certainly the nicest and best handled of any I have seen on the market. It is the only fdn. true to sample, I have ever received."

From Jas. Heddon, Aug. 10, 1883. "I will contract for 2000 lbs. of fdn. for next season on the terms of your letter."

From A. A. Newman, Aug. 24, 1883. "Book my order for 5000 lbs. for spring delivery."

From C. F. Muth, Sept. 6, 1883. "All of your shipments of fdn. during the season were sold on the day of their arrival."

Dealers, send in your orders for next spring, while wax is cheaper, and thus save trouble and money. We pay 28c cash for prime wax.

CHAS. DADANT & SON,
HAMILTON, HANCOCK CO., ILL.

An Opening.

Any doctor desiring as good a *country location* as is to be found in South-east Arkansas, and has as much as $1000 capital, may do well to correspond, inclosing stamp, with R. A. BETHUNE, M. D.,
Snyder, Ashley Co., Arkansas.

GREAT REDUCTION!

For the next 30 days we will furnish the U. S. Standard Honey-Extractor at greatly reduced prices. Now is your time to buy *the best* extractor *very cheap.*

We will also contract to make fdn. on our new Vandervort mills in 100-lb. lots at 10 cts. per pound for heavy, and 15 cts. per pound for light, customers to furnish wax, and pay freight.

In addition to the above we can furnish any thing in the line of hives and sections, at very reasonable prices. Send your name on a postal to

C. W. STANLEY & BRO.,
WYOMING, - WYOMING CO., - N. Y.

FRUIT AND HONEY.

20 BLACK TARTARIAN CHERRY-TREES BY Express for $1. *Well packed.* These are from two to four feet. Can send 20 small ones by mail postpaid for $1. CHAS. KINGSLEY,
Greeneville, Greene Co., Tenn.

CANADA ONLY.

DOLLAR QUEENS BY RETURN MAIL.

H. SMITH, BOX 102, NEW HAMBURG, ONT., CAN.

Sweet-Clover Seed.

New and clean. Can be sown spring or fall. Per lb., 20c; by mail, 30c. J. A. GREEN,
11d Dayton, La Salle Co., Ill.

Recent Additions to the

COUNTER STORE.

Postage.] [Pr. of 10, of 100

THREE-CENT COUNTER.

2	SACKING NEEDLE	28	2 50
	This is a needle 5 inches long, with bent flat point. Very convenient for sewing heavy fabrics, and many other purposes.		
2	SEA-SHELLS, furnished by our bee-friends in Florida.	28	2 50
2	RULES for School Children. Nicely made, one foot long	28	2 50

FIVE-CENT COUNTER.

2	SACKING NEEDLE, 6 inches long	40	3 00
5	HONEY SOAP This is a nice toilet soap	45	4 00
2	JEW'S-HARP, large and loud	45	4 00
2	CHROMOS: 5½x7	45	4 00
	These are beautiful pictures of birds, flowers, dogs, autumn leaves, crosses, etc.; 20 different pictures.		

TEN-CENT COUNTER

8	TEA-STEEPER, 1 pint	85	8 00
	A very convenient utensil for making a little tea of any kind quickly.		
18	DRIPPING-PAN, sheet-iron, 8½x12½	90	8 50
6	COLOGNE, in fancy bottles, slipper shape	85	8 00
	The pretty bottle containing this would usually be considered worth the dime.		
	LAMP CHIMNEY	85	8 00
	These are made of best flint glass, and handsomely engraved. They are not only ornamental, but rarely if ever break.		
	SOAP, CASTILE, in 1-lb. cakes	80	7 50
	CASTER-BOTTLES, with Britannia tops	85	8 00
	These are very convenient to replace, where once broken.		
	LANTERN GLOBE	85	8 00
3	SCARFS, in variety of colors	90	8 50
4	BOOK RECEIPTS	85	7 00
	These are printed blanks, with pasteboard cover. Each book contans 50 receipts.		
8	GLASS MARBLES	85	8 00
	These are a most beautiful ornament, and a good substantial plaything for babies. One who has never seen them, involuntarily breaks into exclamations of surprise. We used to sell them for half a dollar.		

FIFTEEN-CENT COUNTER.

	HORSERADISH DISH	1 25	10 00
	A horse's head surmounts the cover, with the words "Horseradish" plain on the glass.		

Twenty-Five Cent Counter.

	MIRROR	2 00	18 00
	This is a good-sized (8x10) looking-glass in gilt frame, and is a wonder for the money.		
00	GOSPEL HYMNS, Nos. 1, 2, 3, 4, words only, in board covers	1 75	17 00
14	COLD-CHISEL, a good stout one, nicely tempered	2 25	21 00
6	CALL-BELL, nickel-plated	2 00	18 00

Thirty-Five Cent Counter.

6	OIL-STONE, in mahogany case	3 00—	28 00

FIFTY-CENT COUNTER.

	CASTER with 4 bottles	4 25	40 00
	This is all glass, very neat and pretty.		
40	DOOR-MAT	4 25	40 00
	These are made of cocoa-wood fiber; and if placed in the door, and properly used, will save your wife a deal of hard labor.		

SEVENTY-FIVE CENT COUNTER.

24	CASH-BOX	6 50	60 00
	This is made of tin, japanned. Has handle to carry it about, and lock and key.		
10	CARVING KNIFE AND FORK	6 50	60 00
	This is a beautifully finished knife and fork of best metal, with ebony handles.		
60	FOUNTAIN PUMP, or Sprinkler	6 00	55 00
	For extinguishing fires, washing windows and carriages, watering plants, shrubbery, etc., etc. This, although of course not equal to the Whitman pump, is a wonderful acquisition for such an insignificant price. At this date, Nov., 1883, it is selling wonderfully.		

$1.25 COUNTER.

	WASH-BOILER. Small-sized, but pretty and well made	11 25	100 00

$1.50 COUNTER.

	AX. Fine steel, and securely fixed on a good stout hickory handle	12 50	110 00

A. I. ROOT, Medina, O.

Contents of this Number.

Addressing-Machine........ 703
Apiaries near water........ 719
Archie's Premiums.........720
Barnes' mode of Packing...720
Bees 5 miles from Home....703
Bees, Rubbing on Back.....716
Bees, A Poem 712
Bee-Keepers' Exchange.....726
Blue Ridge..................708
Box-hiver, Veteran..........706
Burma 701
California White Sage......710
Chittim-tree 715
Cleopatra's Needle..........716
Collars and Neck-ties........720
Drone Fdn. for Sections 706
Editorials 727
England, Letter from.......720
Every Man to his Trade.....705
Excursion to Medina........724
Frames, Metal-Cornered....706
Heddon's Plan...............708
Holy-Lands with Italians..707
Honey-Peas 707
Honey Column................698
Hot Springs of California..714
Hybrids for Honey 707
Implements, Home-made...706
Indian War-dance...........719
Italians vs. Blacks..........708
Kind Words..................697
Louisville Exposition 715
Maine 706
Maine State Fair............706
Myself and Neighbors 712
Newlove's Section-Crate....710
Reports Encouraging.......725
Report, Marvelous. 712
Sections, One-piece.........709
Slater's Section-Crate.......709
Tobacco Column............ 724
Unsealed Brood 703
Ventilation Bottom.........708
Virgil........................ 699
Willows for Bees 720
Work for Women 709

KIND WORDS FROM OUR CUSTOMERS.

I have taken the premium at the Dallas Co. Fair with the bees I bought of you, which will be quite an advertisement for your business. J. GEORGE.
Buffalo, Dallas Co., Mo., Oct. 22, 1883.

I am very much obliged for those Sunday-school cards. They help our infant class at our Sunday-school concerts once a month. N. C. TUBBS.
Exeter, Clay Co., Kan.

The Novice honey-extractor I purchased from you in July took the premium over all others at the St. Joseph Inter-State Exposition for this year.
M. L. POTEET.
St. Joseph, Mo., Sept. 12, 1883.

Please send me one crate of five Clark's cold-blast smokers. The one you sent me last April did so well this summer that my neighbors who have bees all want one. R. R. COBBUM.
Bluffton, Wells Co., Ind.; Sept. 3, 1883.

Please send GLEANINGS and Clark's cold-blast smoker. You can send me the few cents remaining if you have a mind to, or give it to that jolly baby to buy candy. H. O. BRIEN.
Mile Strip, N. Y.

The A B C book came to hand all right. I am pleased with it, but am sorry that I did not get it cloth. But I did not expect so big a book for $1.00. I would not give it for $5.00, and do without it.
L. M. GOCKLEY.
Akron, Lan. Co., Pa., Oct. 1, 1883.

The six-dollar imported queen you sent came all right. I united two colonies of hybrids, and put her in; let her stay three days and nights, then liberated her all right. She is a daisy. I would not take ten dollars for her. MAD. TALBERT.
Morristown, Ind., Oct. 20, 1883.

The Emerson binder came to hand by last mail, and immediately GLEANINGS for 1883 was placed therein. Success to all your efforts in building up a journal worthy of yourself and the bee-men of America; and may your reward be a happy conscience, a "well done" among your brethren, and a well-filled purse. R. A. BETHUNE, M. D.
Snyder, Ashley Co., Ark., Sept. 17, 1883.

In reading over the convention notes, I find, in your reference to Hanlan's Island, you say, "named after the great *English* oarsman, instead of *Canada's* great oarsman." I presume the mistake was not intentional, but I fear some Canadians will feel a little hurt, as they feel proud of Hanlan. Your description is very interesting. J. L. CALVERT.
Oberlin, O., Nov. 4, 1883.

Thank you, John, for your correction. As I had heard of Hanlan in England, I some way got it in my mind he was an Englishman, and surely did not intend to rob Canada of any of her laurels. I am very glad to know that Mr. Hanlan is a native of our American shores.

OUR 244-LB. SCALE.

The 244-lb. scale that you advertise gives perfect satisfaction, and I would advise bee-keepers to buy it, for it will answer the same purpose, and weigh as correctly, as the high-priced scale. I have tested mine pretty severely the past season by weighing all the girls (I am a young unmarried man, you know), and some of them are pretty big ones too, tipping the beam at 200 lbs. J. M. YOUNG.
Three Groves, Neb., Oct. 26, 1883.

Your last shipment with the missing articles came Aug. 30. All came in very good shape; they were on the road about 16 days; the freight was $1.55. I can make allowance for delays, and some poor management, because I am satisfied that you do, or mean to do, your best. The Jones wax-extractor has paid for itself. I had lost enough wax by worms, etc., to have paid for it before. Every thing that I have received from you has been very cheap and satisfactory. I find it much easier in wiring frames to sew it through than to make nail hooks.
WM. BROWNING.
Garden Grove, Decatur Co., Ia., Sept. 1, 1883.

That Waterbury watch I got for that last club to GLEANINGS has been running right along with a $200 gold watch. I lost it while gathering corn one evening, and found it next day, still hammering away. I carry it loose in my pocket with my knife and tobacco. Did I say tobacco? No, dear GLEANINGS, I never again expect to use the vile weed, and, bless God, I have persuaded my better-half to quit the use of snuff. My 100 colonies of bees will have to be fed, to go through the winter. No rain yet; dry, dry, dry. A drought of over 103 days, and, strange to say, we have some flowers—goldenrod and cotton, with the never-failing chamomile and Texas brown-weed. B. F. CARROLL.
Dresden, Texas, Sept. 25, 1883.

A LITTLE VERSE IN REGARD TO OBSERVING THE SABBATH.

Will not the following match well the anti-profanity cards?

A Sabbath well spent brings a week of content,
And strength for the work of to-morrow;
But a Sabbath profaned, whate'er may be gained,
Is a certain forerunner of sorrow.

Pellsville, Ill., Sept. 12, 1883. J. R. PHILLIPS.

Many thanks, friend P. The little verse is exactly what I want, and we will furnish these cards with the others to any one who wants them, free of charge.

I have long promised myself the pleasure of sending you a notice of our little friends, the bees, in this distant quarter of the globe, but the "care of all the churches" has been too much for me to command the time before to-day, although I have had the notes about me for some time. Perhaps the account may have some interest for you. Our mission work is very prosperous in every department, and pays large dividends. Over 30 baptisms recently reported from our jungle churches. I like your publication greatly, for it has got the right ring to it, and you are doing what every Christian man ought to do—take his religion into his business. God bless and prosper you. A. BUNKER.
Toungoo, Burma, Oct. 26, 1883.

I wish to say just a few words in regard to friend W. Z. Hutchinson's article on page 603, October number. I read it and re-read it with much interest, and I wish every bee-keeper who attends fairs where there is an exhibition of bees and honey would give a detailed account of what they saw, and in what shape, how arranged, etc. I think it would be interesting to all; and especially to those who take part in the displays made at the various fairs, it would be profitable. Here are a few points that I have gained from his article: Mr. Hunt's pyramid of honey; those full colonies of bees in glass hives on a *revolving* bottom; I have several times taken a colony of bees to fairs, but never thought of a revolving hive. Then those queens in cages, all fast on a board that revolves; almost every one wants to see a queen, and it is usually quite a task to find one and keep sight of her so all can see, even in a one-frame hive, while it could be easily done in a queen-cage. Then the gilt-edged honey, and so on throughout the entire article. W. W. BLISS.
Duarte, Los Angeles Co., Cal., Oct. 25, 1883.

I see in a sample copy of JUVENILE GLEANINGS, that you want a better name than Peter for a rollicking boy-baby. I think a man in your business ought not to look further than to the first bee-man for a name. What name is prettier or more appropriate than Huber? MRS. M. E. HAWKINS.
Highlands, N. C., Oct. 31. 1883.

I have perfect confidence in dealing with A. I. Root. I don't wish to flatter; but if I ever dealt with a straight, fair dealer, it is your honor. Extractors and knives are just what they were represented to be. The above is written with a quill from my pet bird, the American eagle, that I have had ten years. W. C. NEWTON.
Fulton, Oswego Co., N. Y., Aug. 28, 1883.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

NEW YORK. — *Honey* — Our honey market is in about the same condition as it was a month ago; however, warm weather still prevails, and has a tendency to depress prices. We desire to inform producers of the fact that we are making a specialty of New York State honey, and placing the same to dealers under such brand. There is no doubt that New York State has not had a fair footing with other sections, owing to the fact that most of New York honey has been labeled and sold as California honey. We believe our State honey will compare with any in this country; therefore we have decided to represent all honey as coming from the section it really does. We quote as follows:

Fancy white-clover in 1-lb. sect's, no glass,	19½@20
Fair to good " " " " " "	17 @18
Fancy white-clover in 2-lb. sect's, glassed,	17 @18
Fair to good " " " " "	15 @16
Fancy buckwheat " 1-lb. " no glass,	15½@16
Fair " " 1-lb. " " "	14
Fancy " " 2-lb. " glassed,	13½@14
Ext'd honey, best white-clover, in kegs or small bbls.,	10 @10½
" " " buckwheat, " "	8½@ 9

Beeswax is scarce, and has a tendency to higher prices. We quote for prime yellow, 33@33½.
Nov. 10, 1883. **MCCAUL & HILDRETH,**
80 Hudson Street, New York.

NEW YORK.—*Honey.*—The demand for honey has been good all during the month of October, and is still increasing at the beginning of this month. We expect to have a good market, and dispose of large quantities from now until the first of January. We quote as follows:

Fancy white-clover, 1-lb. sections, paper boxes,	21c
" " " " " glassed,	19@20c
" " " 2 and 1½ lb. " "	17@19c
Fair " " 1 lb. " "	18@18c
" " " 2 and 1½ lb. " "	15@17c
Ext'd basswood or clover, in kegs and bbls,	10@10½
" Dark and mixed, " " " "	8@9c

Beeswax is very scarce; the demand is very large, and dealers hold same at 31@33c.
Nov. 10, 1883. **H. K. & F. B. THURBER & CO.,**
Reade & Hudson Sts., N. Y.

CLEVELAND.— *Honey.*— The honey market never was better with us than this year; every lot of choice white honey has been sold on arrival at 18@19 for 1-lb., and 17@18 for 2-lbs. Second quality is not in good demand, and does not go off readily. For extracted honey there is no inquiry.
Beeswax. 28 c., but scarce. **A. C. KENDEL,**
Nov. 9, 1883. 115 Ontario St., Cleveland, O.

[Well, friend K., that is good on comb honey, and sounds quite encouraging; but why in the world don't you Cleveland folks work up a trade on extracted honey? If you get some good honey nicely put up in neat little sample packages, to give them a taste, you could do it easily.]

CHICAGO — *Honey* — There is a steady demand for comb honey by the retail trade in a single-package way. There is sufficient, however, to warrant the thought that all good honey will be sold before spring. The experience of last year is preventing any speculation in it, many retailers having, in the latter part of the winter, to sell for less than they paid in the fall. I quote choice white comb, one-pound packages, 20c.; 1½ to 2 lb., 15@18. Extracted honey, 8@10c.
Beeswax.— Yellow, 33c.; medium, 28@30c.; stocks light. **R. A. BURNETT,**
Nov. 9, 1883. 161 South Water St., Chicago, Ill.

CINCINNATI. — *Honey.* — The demand for comb honey is fair with a fair supply. Offerings of extracted honey are plentiful, and there is a large supply on the market. The demand is slower than last season, but appears to be improving gradually. Choice comb brings 12@15c., and extracted honey 7@9 on arrival.
Beeswax is of ready sale at 28@30c. on arrival.
Nov. 6, 1883. **CHAS. F. MUTH,**
976 Central Ave., Cincinnati, O.

ST. LOUIS — *Honey.*— Choice comb selling lightly at 14@16c. per lb. in fancy packages; inferior dull at lower figures. Strained and extracted, salable in lots at 6½@7c.
Beeswax readily salable at 26@27c. for prime.
Nov. 10, 1883. **W. T. ANDERSON & CO.,**
104 N. Third St., St. Louis, Mo.

BOSTON.—*Honey.*—One-pound sections, 18c; 2-lbs., 16@17c. Extracted, 10c. *Wax*, none. Trade quiet.
Nov. 12, 1883. **BLAKE & RIPLEY,**
57 Chatham St., Boston, Mass.

I have about 3000 lbs. of this season's crop yet on hand. It is put up in kegs holding from 56 to 150 lbs. I am willing to take 8½c. here on track.
Epworth, Ia., Oct. 25, 1883. **A. C. PEAVEY.**

PLEASANT AND PROFITABLE
EMPLOYMENT IN RAISING
SILK AT A SMALL EXPENSE SILK

Silkworm Eggs, Book of Instructions, and every thing pertaining to Silk Culture, for sale. Send for price list. Order at once, as our supply of eggs is limited. Address *E. A. Woodruff, Medina, O.*
11½-12-1d

FOR SALE. — A Barnes combined Buzz and Scroll saw. Price $25 00.
J. H. COLVILLE, Goshen, Clermont Co., Ohio.
11½-12c

40 CHROMOS or TRANSPARENT CARDS, name on, 10c; 11 packs, $1. 12 Gilt Edge Embossed, Hidden name, 25c. Address BELOIT CARD CO., Beloit, O.

THE BEE-KEEPERS' HANDY BOOK.

216 pages, bound in cloth, by mail, post-paid, $1.00 per copy. Send for prospectus, and our special circulars describing three new and useful articles for the apiary.
11½-tfd HENRY ALLEY, Wenham, Mass.

QUITE a brisk trade has started up since our offer of 5 per cent off on all present orders. But since we are not badly crowded, we extend the time to Dec. 1; in other words, a deduction of 5 per cent will be made on any goods mentioned in our price list, on all orders reaching us before the 1st of December. This refers to subscriptions for GLEANINGS, with all the rest. Perhaps it might be well for some of the club agents to send us now, $85.00 for 100 copies, and they would then have all next year to dispose of them. GLEANINGS for 1884 will be published its present size as a semi-monthly, Providence permitting. Now bear in mind, friends, this will not apply to any orders reaching us after Dec. 1.

GLEANINGS
IN
BEE CULTURE.
DEVOTED·TO·BEES·HONEY·&·HOME·INTERESTS.
F.A. Whiting

Vol. XI. NOV. 15, 1883. No. 11.

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VIRGIL'S TREATISE ON BEES.

Continued.

FRIEND ROOT:—Did you never hear of a lot of individuals picking up a mistake, and repeating it, and riding it for a hobby, until they not only heartily believed it, but could not tolerate the thought of any one else doubting it? I suspect, that generation after generation of writers on bee-craft have used Virgil as a dark background, to set off their own superior wisdom against, until they are in just about that same fix. Now as to the charge that I have greatly helped Virgil in this translation: If that expression means that I have introduced ideas not to be found in the original, I shall feel inclined to fight like a Trojan. In two places I know of, and there may be others, I have made mistakes that I will correct; but I have been conscientiously correct in the effort to leave out nothing material that the author did say, and to put in nothing material that he did not. Immaterial additions of common-places, such as might about as well belong to one poet as to another, are frequent, when there is space that needs filling up. Thanks for being forewarned and forearmed, if this version is put in permanent form I think it must be accompanied by a literal, word-for-word translation, each Latin word with its English equivalent under it, so the unclassical reader can see just what's what. If, on the other hand, helping Virgil only means taking his ideas and setting them forth in clearer light and more words than the original, why, then I shall "confess judgment" at once, and instruct the court to bid me "go sin again." Virgil's language is more concise than pleases modern poetic taste. I wish to expand it somewhat; and where can that be better done than on those striking ideas that are crowded into a single word? Again, I deem it necessary to have some sort of relation between line and line of original and translation, else an unpleasant effect will be produced by having so many sentences and important clauses end at improper places. To render Virgil's lines of from fourteen to seventeen syllables, of matter already too condensed, by an equal number of ten-syllabled lines, would be ruinous; therefore I allow two English lines for each one of Latin, which gives four or five syllables for expansion.

Let me now bestow a few words upon Dryden's translation. It would not look well for the like of me to take the like of him to task as to whether he did or did not properly render the poetic fire of our noble author; but in some things a "cat may look at a king." At the point where—

Then from their dwellings forth anon they bear
Those bodies whence the light of life has fled,
And lead the sad processions of the dead;

Dryden renders it—

"And crowds of dead, that never must return
To their loved hives, in decent pomp are borne;
Their friends attend the hearse; the next relations mourn."

There is not a syllable of original out of which to make this last false and ridiculous line. What Virgil actually said is scientifically correct; but Dryden evidently thought it a whim, and could not resist the temptation to make gratuitous additions. Really, my friends, is it not better for a translator to respect his author—and even err a little on *that* side, if he must err at all?

At the point where—

Nor on the hearth the reddening lobsters roast,

Virgil does not add a word to explain why shell-fish must not be roasted by bee-keepers. A solution is attempted in a note under my version; but Dryden, without any superfluity of either truth or poetry, renders:

"Nor roast red crabs, *to offend the niceness of their nose.*"

When Virgil's language admits of more than one meaning I take the sense which is in accordance with the facts. Candidly, my friends, is not this the right way to do? A writer should be credited with talking sense, till something else is proven. At the place where the bees cease from their fanning, and become quiet at night, Dryden renders—

"—Their evening bells
Dismiss the sleepy swains, and toll them to their cells.
When once in beds their weary limbs they steep."

In this place the idea of bees creeping into their cells to sleep on summer nights can be deduced from the original without violence; but as it is not correct in fact, and not at all a necessary inference from the original, I render differently. Their tolling of evening bells, in convent style, is a gratuitous addition of Dryden's.

Dryden's translation has done more to form the prevalent opinion concerning Virgil's treatise on bees than any other influence; perhaps more than all others combined. As to my own translation, let criticism take a definite shape, and I will retract any passage where I am convinced of material error; but the general charge, that I am making Virgil out too wise, I must not be expected to regard much, as I started out to show that a very general opinion is false.

SPONTANEOUS PRODUCTION OF SWARMS.

If all the race by sudden chance should fail,
And no resource to gain them should avail,
'Tis time a great invention to unfold,
Taught by a wise Arcadian of old;
To tell how tainted gore of bullocks slain
Hath often brought the race of bees again.
Searching tradition to its fountain well,
The utmost of the matter I will tell.

Where by the outspread river of the Nile,
Steeping its vast and placid flood the while,
Where the blest race of Canopus remains,
And sail with painted boats their farm domains,
Where wide the river spreads its mighty surge
To quiver-bearing Persia's western verge,
Flowing from lands where negroes dark are seen,
With its dark silt it maketh Egypt green;
And as to meet the sea it pouring glides,
Into seven different mouths the stream divides.
All Egypt firm believes in every part
A sure relief by this surprising art.
First, for this use a little spot is found,
And lightly built with roof and walls around;
And facing the four winds that blow from heaven,
Four slanting windows to the roof are given.
Then a young bullock's sought, upon whose brow
The two-yeared horns took their first curve just now; (1)
And while he strives for life with might and main,
They stop his breath, and close his nostrils twain;
Then slain with blows that do not break the skin,
The tissues bruised are half dissolved within. (2)
Thus placed they leave him in the pent-up room;
Yet underneath his sides they place perfume,
Sweet leafy branches broken well are strewn,
And mixed with thyme, and cassia newly grown.
This should be done when first, on gentle wing,
The zephyrs play among the waves of spring,
Before the meadows blush with colors new,
And bloom with early flowers of rosy hue,
And ere beneath the beam, on fragile rest,
The chattering swallow doth suspend her nest.
Meanwhile a humor, of itself alone,
Warmed into life within each tender bone,
Ferments, and presently in wondrous way
Are living creatures seen in thick array.
First lacking feet, a little waiting brings
Their members all, and, buzzing with their wings,
They circle round and round again with care,
And more and more they try the subtile air,
Until at length they burst away a swarm, (3)
As rain poured out when summer showers form;
Or as the arrows from the whizzing string,
Athwart the sky a sudden glimmer fling,
And ope the battle with their rustling flight,
When the swift Parthians begin a fight.

(1) Bossy at first has no horns, then little loose buttons fastened to the skin, then short straight horns, then horns that are curved in one simple curve, and finally in old age, horns that are long, and curved with a complexity of curves. Just the age when the horns no longer look straight was considered right for this piece of sorcery. Apparently they considered it important that the animal should be aged just right.

(2) If one would realize what Christianity has done for us, let us look at this. What a condition the wisdom, the chemistry, the heart, of the ancient world was in to be trying to accomplish things by such exquisitely cruel performances as this!—

"Dark places — full of habitations of cruelty."

(3) I'm going to defend Virgil right manfully here. Not that the scheme he gives would ever succeed; but almost any sensible person, standing under the light which Virgil possessed, would suppose it might succeed. It was sensible to seek a perpetual motion until something of the great doctrine of the conservation of force was realized; but now only uneducated persons and cranks are expected to work at perpetual motors. It was sensible to seek a means of turning all metals into gold just so long as metals could be considered *compounds*. Metals have a strong family likeness to each other, and the thought that they might be a family of compounds with the main ingredient the same in each, just as a large family of oxides and salts is often found to contain the same element as a base, was once a very reasonable thought. It is played out at the present day, that's all. But the belief in spontaneous generation can hardly be written played out just yet. A large percentage of our population, take them just as they run, believe in it this very day. Minute living organisms sometimes appear so suddenly, and in such countless numbers, that it is still a common impression and remark, that they "just breed out of nothing." Far beyond all this, our scientists do not altogether scout the notion. It is, I believe, not yet twenty years since the scientific world was all agog about the spontaneous generation of a certain species of minute insects in a given chemical solution, after all organic germs had been

shut out of it. The final result was, I believe, that with more careful purification of the ingredients, and more careful filtration of the air in the bottle, the insects failed to appear. But the present generation has no right to laugh at Virgil till all those experimenters are dead.

Does organic life demand parentage? or is blind chance able to compass it? or is nature full of intangible molds, as it were, into which teeming life is cast, under the superintending eye of God? or do evil spirits take the liberty to play at making insects sometimes? If parentage is demanded, must it always be *like* parentage, or may there be a wholesale transformation when in a nascent state, as from flies to bees? These have been open questions, if they are not now; and it is not specially discreditable to Virgil that he inclined to a losing side.

Living creatures do appear in great numbers in a decaying carcass. They do put on legs and wings, and fly away. Not one species alone, but different species thus appear—why not bees also, if the experiment be conducted just right? Flies often resemble bees, enough to deceive careless observers. Doubtless some who failed to get a swarm in this way actually thought they had some bees, only they failed to capture them when they swarmed away. As you remark, friend Root, every swarm that flew over a dead carcass, or out of a grove into which a carcass had been dragged away, would be "confirmation strong." And frequently, no doubt, colonies would be found inhabiting an old sun-dried carcass, as in Samson's case; and these would be supposed spontaneous.

And now as to the rest of this Georgic, I think we will have in GLEANINGS just a brief review, with selections; but if the work is reissued as a book, we will want the whole text of the poem in that.

E. E. HASTY.

Richards, Lucas Co., O., Nov. 9, 1883.

Friend Hasty, I am going to call you to order. You ought to know that our old friend Mr. Langstroth would not accuse any one whom he knows as well as he knows you, of purposely introducing ideas that are not in the text. And furthermore, you should know that I would not print such a suggestion, if anybody would mention it to me. I should write and tell them to tell you about it, just as I tell you in the Home Papers this month. "Go and tell him his fault between you and him alone." What Mr. Langstroth said was rather complimentary, if any thing; or, in other words, he accused you of doing exactly what you tell us you have done, and I think you have done it nobly too.—In regard to spontaneous generation, I am glad indeed you have given us this little talk on the subject. Grown-up people do to-day insist and declare, that weeds as well as insects grow out of nothing. You tell a lot of old farmers that fireweeds do not grow without seeds, and they will make it hot for you right away. Try it, and see. Probably you will give up the task of trying to convince them, and go away leaving them more of the "same opinion still" than they were before. How many of the boys who read this are there who believe that horse-hairs grow into snakes, if left in the water? They will tell you they know, because they have seen horse-hairs that would wriggle, and were alive, and no mistake. I suppose the boys will believe me right here when I tell them that no horsehair ever came to life since the world began; and that these little snakes are only snakes that are so small and slender that they look exactly like horse-hairs. When I was a child I remember being gravely informed that different kinds of hairs made different kinds of reptiles, and that there was a "varmint" in the woods whose hair would produce fish! All you had to do was to pull it out and sprinkle it in the well or cistern, and behold, in a little time you had lots of little fish teeming around. Now, I want to emphasize another thing: Any man who talks of perpetual motion is behind the times, and totally misunderstands science and scientific progress. Electricity, magnetism, light, and heat, do not avail a particle in helping wheels to go without any thing to turn them, or weeds to grow without any seeds to start them. Truly, Virgil was excusable; but people are not excusable nowadays for holding to such exploded superstitions.

HONEY-BEES IN BURMA.

A CONTRIBUTION FROM ONE OF OUR MISSIONARY FRIENDS.

THERE are many kinds of honey-bees in Burma, India, both large and small. Every freshly flowering tree or shrub is soon covered with swarms of bees of various sizes and colors, and their humming wings are very musical.

There is little or no effort made to domesticate them, though there would seem to be but little difficulty in doing so. Whatever attempts have been made have been attended with some success. Some tribes of natives care for certain trees where they find swarms housed, stopping up the entrances, save a small place for the bees, to shut out enemies, or surrounding the tree with sharpened sticks to keep away bruin, who is as fond of honey here as his brother in America.

The bee I am now speaking of, and which I will designate as No. 1, resembles, so far as I can judge, the domestic bee in America very much, speaking generally. He has three yellow bands, is about the size, and as lively and social as the home species. The honey and brood are deposited in any safe hollow place, usually in trees, and, of course, the flavor of the honey depends much on the kind of flower from which it is gathered; but it is very good, and much sought after. The bee is very industrious, and of a peaceable disposition, and will seldom molest one, except its nest be attacked, when it knows how to sting as sharply as his mate over the sea. The natives say, the time for taking the honey is the full moon during the dry season. The swarms are usually small, a few pints only, and a few pounds of honey is the most obtained from any nest. These bees are often seen flying through the air in a beeline for some distant home, and in old forests are very abundant. The bears often find them, and wrench off, if able, large splints from the tree with their teeth and claws, to get the honey; but many trees, as varieties of the ebony, defy the teeth of the strongest bear.

I see no reason why this species could not be domesticated, and become very profitable servants, The experiment has never been tried, to my knowledge. A swarm of these bees took up its lodgings under the desk in the office of an agent of a timber company here, and remained there for a long time, troubling no one, though in the same room with numbers of people.

The second kind of bees is similar to the above, though perhaps a little smaller. This variety builds its nest under or in rocks. The swarms are usually much larger than No. 1, and resemble those at home more in size of the swarms, and kind of honey produced. The honey is very fine flavored, and abundant. This variety is, however, much less numerous than No. 1.

No. 3, perhaps, ranks first in importance in the province. It is a large bee, about one-half inch in length, rather small around, in proportion to its length, long-waisted, and bright red and yellow. He is a gay fellow, with a fierce sting. He attaches his nests to the under side of great limbs of the dammer-oil tree, and on no other kind that I am aware of. There are often from fifteen to twenty nests on a single tree. As the bees occupy these trees from year to year, the trees become valuable property, and their owners collect only a portion of the honey each year, as, if some nests are left, they will return again to their old home after the rains. During the rains they "go west," probably to some dry country, or of less rain. These nests are very large, from two to four feet in length, and one to two feet in depth. The natives climb these grand old trees in the night time, smoke off the bees, and cut off the comb into a basket, and let it down to the ground with creepers or vines — a perilous operation. The honey is rather rank, but is much sought after. The wax has a ready sale.

No. 4 is larger than No. 3, with a similar-shaped body. The back is, however, dark brown, and the belly and thorax jet black. The honey of this bee is much better flavored than that of the above; and one nest of this bee is found in a place, which is usually some giant creeper in a dense thicket of trees. The comb is often from two to five feet in length, and from two to three feet in depth. This bee is very fierce, and woe to the native who dares to attack him without due caution. I saw a native on one occasion assay to rifle one of these swarms, about fifty feet from the ground. The vine to which it was attached was large, and twining in and out from tree to tree. The bees took the initiative in the battle, and the native was soon making the best of his way down the vine to safer quarters. But the bees were too much for him, and he dropped some twenty feet to the soft earth; yet the bees kept his trail and set on him at the foot of the tree. He was nearly naked, and they had a fair chance at him. The poor fellow shot out from under that tree with a good deal of agility, and took to a stream of water near by; and only by running and ducking under the water, and splashing it about, did he finally escape.

No. 5 is similar to the above, though not found in such large colonies. Its prevailing color is reddish, and some parts are light red; sting very badly. The peculiarity of this bee is, that it always places its nest so as to receive the rays of the rising or setting sun. It also builds on large vines. The honey is excellent, and much sought for. Nos. 3 and 4 build only one nest in a place, and do not seek the same place from year to year, as do the second kind described.

No. 6 is a small bee, which selects a small limb on the orange-tree, or the pendulous end of the bamboo, for its home. The swarms are small, and the comb is seldom more than one or two quarts. The comb is irregularly shaped, and a part is placed above the limb to which it is attached, and so shaped as to form a water-shed to the brood below. The comb is very white, and the honey sweet and delicately flavored. The bees are not much larger than rice kernels, and their sting causes very little irritation. They seem to rely on the position of their nests for protection. There are other kinds of this species of tiny bee, each having its peculiar ways, but of little importance, save as a delightful study to those interested in them. They are found in small colonies only.

The last kind, No. 7, I will mention, seems to be a distinct species of bee from all others. This kind is found in large colonies, and in some parts of the province is very numerous. The bee is about the size of the last variety mentioned, dark colored, with white-tipped wings, and has no sting. The wax is very valuable, and forms a considerable article of trade. It is used for stopping leaks in boats, and similar purposes. The honey is acid, and not used. This bee builds covered ways to its nest, and one often meets these tiny covered ways projecting from a few inches to a foot from the tree in which the nest is. The tree most often occupied is the banyan, with its many openings in the trunk and roots. This little fellow, though he can not sting, is not a favorite; for attracted, I suppose by the perspiration of the body, he seeks an entrance into the eyes, mouth, and nose, or crawls over the hands and person most persistently, though lots of his fellows die in the attempt, and the tickling sensation is very annoying.

The bee of the hollow tree is our favorite, perhaps because he reminds us of the dear old home. In any case, honey here seldom tastes like that we used to bring away in tubs and pails from some grand old forest-tree in New England, when the goldenrod in bloom told us boys that fall was upon us.

January, February, March, and April, are the honey months in this land, as the many forest-trees are a mass of flowers, sweet scented, till the air is heavy with sweet odors, which are almost overpowering. Then the bees are most lively, and are the one thing that show enterprise and activity in this heathen land. A. Bunker.

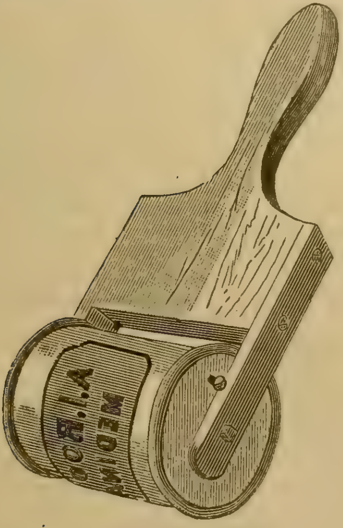
Toungoo, British Burma, Oct. 26, 1882.

Many thanks, friend B., for the valuable report you give us. I was inclined to think that No. 3 was *Apis dorsata;* but perhaps No. 4 is the one. The friends will remember that the wide long combs are what attracted the attention of Frank Benton. The story given in our last number in regard to *Apis dorsata* makes this account all the more interesting. It seems as though this article might almost give D. A. Jones the fever to go on another exploring voyage; for as you state it, friend B., there would be very little difficulty in getting bees of any of these races to bring home. Is there not some enterprising bee-keeper among us who would like to test these new races of bees in domestication? Our friends will observe, that the letter was written quite a while ago; but it was a long time on the way, and then it got mislaid. Another strange point friend B. brings out that I have never heard mentioned, is, that there are races of bees that migrate, much as birds do, storing honey, building combs during the summer months, and then migrating to a more favorable clime during the wet weather; and, stranger still, we are told they sometimes come back and occupy their old hives the next season. The above article seems to add more to our stock of information in regard to bees from Further India and that vicinity, than any thing we have ever had.

A MACHINE FOR ADDRESSING BOXES AND PACKAGES RAPIDLY.

A SUGGESTION TO COMB-HONEY PRODUCERS.

A FEW days ago while at the Cleveland seed-store I saw one of friend Kendel's men using the little implement we figure below, to mark baskets of grapes. The baskets were nicely addressed, about as fast as a boy could hand them out the wagon, and another one set them. The letters were so plain and distinct, and the work was done with such marvelous rapidity, that I have had the machine engraved.



ADDRESSING-MACHINE.

It is, as you will see, a little roller set into a frame, with a rubber stamp tacked to its circumference. The coiled spring inside brings the roller back promptly to its place as soon as it is lifted from the box. A screw set in at the right point causes the roller to stop where desired. After rolling it on the box cover or basket cover, it is rolled on an ordinary inking-pad. As the rubber is pliable, even if the surface should be uneven it makes a plain, distinct letter all the same. Of course, these machines can be used only where you are sending a great many packages to one firm, as it is intended for only one. However, if you have been in the habit of sending your honey right along to some particular firm, it would be well to have a stamp for the firm. Of course, different addresses can be put upon the same roller by having different sheets of rubber. Friend Kendel writes the following in regard to it:

The machine was gotten up for us by Messrs. F. Ijambe & Co., No. 178 Superior St., manufacturers of rubber stamps. They answer our purpose very nicely, on either smooth or uneven surfaces. We are not sure but there may be a patent on a roller stamp. We have not seen or heard of such a thing, but there may be. A. C. KENDEL.

Cleveland, O., Oct. 31, 1883.

We can furnish the machines with one rubber stamp, for $2.50; an extra rubber, for $1.25.

UNSEALED BROOD FOR SWARMS.

WILL BEES DESERT UNSEALED BROOD WHILE UNDER THE INFLUENCE OF THE SWARMING FEVER?

THERE seems to be quite a controversy going on at the present time over the above question; and as I have had some experience in the matter, I will try to give it as intelligently as I can.

Several years ago, while living in another part of this county, I had some trouble about bees leaving after having been hived. On one occasion I had a swarm come out the next day after being hived, and I compelled it to cluster, and I again hived it, and in the afternoon it again came out, and this time I put it into another new hive, giving it two combs of brood in all stages, from the egg to sealed larvæ. The next day they did as before, and were repeatedly hived day after day for four days, and they finally left for the timber, going against a strong N. W. wind.

I followed them, and had the satisfaction of seeing them go into a large limb of a very tall oak-tree; and as their repeated swarming had so reduced them that they were no longer a large swarm, I concluded they were not worth the work it would take to get them. A couple of years later, while helping my father harvest, they had a swarm of bees which refused to stay in any hive they were put into, and my father, being an old-fashioned bee-keeper, *knew positively* that something must be wrong with the hives, but could not find out what it was. He had washed some out with salt, and smoked some with sulphur, and still others were merely cleaned, so as to smell sweet; still his bees would not stay. I told him I had heard that sometimes bees would stay if given unsealed brood. He laughed, and said, "Where will you get unsealed brood?" "Why, in another hive, of course," said I. "Then," said he, "just you get some, and give it to them." And as the swarm had by this time got hungry and very cross, he expected to see some fun. I first got a roll of cotton rags in lieu of a smoker, and went to one of his L. hives (he had just two with bees in, the rest being gums), and took 2 frames of unsealed brood, and put into an empty L. hive, and then took a pan of sweetened water that my mother had prepared by my direction, while I was getting the brood ready, and I sprinkled that swarm so that the bees were quite wet; and after waiting a few minutes until they were no longer hungry, they were shaken down on a sheet in front of the hive, and they ran in so contentedly that we all voted the thing a success, and went to our work in the harvest-field, my mother volunteering to watch the bees. When we came in from the field at noon we all went to look at the bees, and that swarm seemed to have got down to business in a way that looked encouraging; but at 3 o'clock my mother called out that the bees were swarming, and, sure enough, here they came, just over our heads, and not more than 10 feet high. We gave pursuit; and after going about one-fourth of a mile they went directly into a large honey-locust tree, where they were allowed to remain until fall, when the tree was cut for the sake of the honey that it contained. Since that time I have frequently given unsealed brood to swarms that wanted to leave, and sometimes it had the desired effect, and other times it did no good.

The present season I had a swarm that refused to stay in the hive, although I gave it brood. After hiving it the third time it left, and I followed it, and it went to a large oak-tree about 300 yards from the apiary. This was about 4 o'clock, July 3d. I had several times taken young squirrels out of the tree, and I knew just what kind of a hollow the tree had. The top was broken off, and the break had grown over so that the hole was not more than 6 in. across, and the hollow in the tree was about a foot across, and 6 feet long. I set a nail-keg over the hole, and left it all night, thinking that perhaps the bees would gather up into the keg; but on going there the next morning I found about half of the bees in the keg, which I let down with a rope, and carried back to the hive, and shook on to a sheet, and watched for the queen, but did not see her. So I went back with my keg, and set it on top of the tree, and cut a small hole just at the bottom of the hollow, and got my smoker to work, thinking to drive the bees up into the keg; but instead of going into the keg they swarmed out and clustered on a limb about 16 feet from the ground. I then set a long ladder against that limb, and took my keg and smoker, and undertook to smoke the bees up into the keg there, but got more bees outside than inside. But I saw the queen go up into the keg; and as that was what I wanted, I just took that keg and shook the bees on to the sheet in front of the hive, and caught the queen and clipped her wing, and then let her run in with the rest of the bees. Those bees that were left at the tree soon returned to the hive, and all went lovely afterward.

From the experience that I have had I should say, that, when a swarm of bees have a certain location picked out to which they wish to go, they will not be coaxed to stay, not even with unsealed brood. I am no advocate of clipping queens' wings; but hereafter, when a swarm persists in leaving the hive, I will use the scissors on the queen, even at the risk of clipping an unfertile queen, as it is better to lose a queen than to lose both swarm and queen, and an unfertile queen is easily replaced.

DO BEES RECOGNIZE EACH OTHER BY THEIR SCENT, AND DOES THE QUEEN GIVE TO EACH HIVE ITS PECULIAR ODOR?

I see by your remarks in reply to article on page 577 of GLEANINGS, that you think it incredible that the queen can give to a hive and its bees this peculiar scent. My experience will not throw much light on the subject; but I am satisfied in my own mind that the queen does not give this peculiar scent, if, indeed, bees do thus recognize each other, which I very much doubt. For several years I have always united weak stocks in the fall; and as my experience this fall has been the same as other years, I will give it.

In preparing my bees for winter I found that I had 6 colonies too weak to winter successfully, so I doubled them up, putting two colonies in each hive, thus making three of the six. This uniting was done near evening; the weather was cool, and the bees were clustered on 3 combs in each hive, so all I had to do was to remove the empty combs from a hive, and put the combs containing bees and honey to one side of the hive, and then lift the combs with the bees and honey out of the other hive, and put them in the opposite side of the first hive, putting combs between the clusters on which there were no bees, thus separating the two swarms. Both swarms were allowed to retain their queens. The bees remained quiet all night, as it was so cold they had to keep clustered to keep warm; but the next day they flew quite strongly, but did not fight, the entrance to the hives being left open the full width of the hive. About one week after uniting those swarms, a neighbor told me that he had a queenless colony which, in other respects, was good enough to winter over, and asked me if I could spare him a queen. I told him how I had united all my weak colonies, but that I would look and see if some of the hives did not have the two queens yet, and, sure enough, the first hive opened had its two clusters of bees, and in each cluster was a queen, one of which I gave him. I have known such clusters to remain separate for three weeks, and retain each its queen, and I don't know how much longer, as when taken out of winter quarters in the spring there was always but one cluster and one queen in each hive so united. It must be remembered, that there have been several days in which bees flew freely; still there was no quarreling. Now, if the queen gives to the hive its peculiar scent, which queen out-scents the other, and thus gives to the bees their peculiar smell? I think you are right in thinking that their actions have more to do with it than their smell.

Muscatine, Iowa, Nov. 5, 1883. W. S. FULTZ.

ABOUT THAT HONEY FROM OAK-LEAVES.

A FURTHER REPORT IN THE MATTER, FROM FRIEND CORK.

THE Saturday after you were here, being a beautiful day, I examined about 40 hives to ascertain their state as regards queenlessness, etc., in preparation for winter. Although I opened so many hives, and occasionally broke small pieces of comb containing honey, I had scarcely any trouble from robbers. They were still getting so much honey from the oak-trees that they were not in a robbing mood. I think they must have gathered from 1 to 5 lbs. per hive during the four days they were able to work at it. The honey was quite thin and clear, and tasted very much like maple syrup. In all the hives, except where there were very young queens, brood-rearing had ceased; but this flow of oak honey started the queens laying again. GEORGE CORK.

Niagara, Ont., Can., Oct. 29, 1883.

If the honey was light in color and right in flavor, I should hardly think, friend C., that it was the work of aphides. Now, is it possible that this is a vegetable exudation from the leaves of that particular species of oak-tree? Please note if it seems wholesome or otherwise for bees; that is, if your bees have the dysentery badly, please inform us, or to the contrary.

EVERY MAN TO HIS TRADE.

ALSO SOME SUGGESTIONS IN REGARD TO MAKING OURSELVES USEFUL.

THIS is an old saying, and one we are mostly familiar with, I presume, but I do not know that a great many of you are familiar with the great truth that lies in this. I suppose, of course, you know that, if you should take your horses to the shoemaker to have their shoes set, it would take the shoemaker a great while longer than it would the blacksmith, and there is very little likelihood of his having it right when it was done. Well, in our business we every day realize the importance of "every man to his trade." Sometimes our friend Samuel, who does all the digging all about the premises, happens to be away, and some one else is called upon to do the same digging. Now, almost anybody can dig, after a fashion; but there is not one in the whole hundred of our employes who can do digging any thing like as well, or as profitably to myself, as Samuel can. And so it is with other things. If you wanted some Simplicity hives put up in ten-crate packages, it would take a green hand nearly half a day to put up one; and he would be hardly likely to get it right, even then. But if he kept right on, in the afternoon of the same day he might put up two or three such packages, and do it tolerably easy besides. Now, if you should keep him at it week after week, he would soon put them up as fast as he could handle his pieces and his tools, and not make a mistake either.

In the business of shipping off goods, the reason why we have so much trouble is because a packer has to be constantly changing around from one thing to another; whereas if we could keep him right along on one thing it would be a great saving to myself and all concerned. One more item: If we kept one man packing hives, and we got over a thousand ahead, so that no more were wanted for months, when the time came around to have more hives packed, it would be better for us to pay this man two or three dollars a day, if he could be had, than to take a green hand at one dollar per day. The same idea applies to more common things; for suppose I want some sewing-machine oil put into bottles, and ask the girls, "Which one of you has ever put oil into bottles?" One of the younger ones will say, perhaps, "Why, Mr. Root, I have never done it, but I am sure I can put oil in a bottle, and cork it up."

Do you think she can, my friends? I will tell you about how it will turn out, and I presume if I were to set any one of you at it who had never done such a thing, you would get oil all over your clothes and the furniture, and take so much time at it that we should lose money in trying to sell the oil at five cents a bottle. It is true, there are people who have got so much judgment and good sound common sense that they will take a new job and do it pretty well the first time; but such people are very scarce. When you find them, you can be pretty sure that they will ultimately become foremen of factories or other large places of business. There is constantly a great demand for handy people; in fact, the world is clamoring for them. We want handy people; oh how sadly we need them! — children who will not break, spill, destroy, and ruin so much of the work you give them to do that it is cheaper to do it yourself, even though your time may be very valuable. Well, now about the oil:

Perhaps Mary says she put up the oil last fall. "Well, then, Mary, you take this can of oil, and these bottles, and do it as nicely as you did before." Suppose, as soon as I have left the room somebody else wants Mary, and she turns the job over to some one who volunteers, with all the best intention in the world. What do you suppose will happen? I will tell you. The oil not only gets spilled, and the bottles greased, but she uses the wrong implements, making the task so slow that it will take a whole day to put up a gross. Then after it is done, some of the corks will be fitted so loosely that they will come out, and the oil run all over somebody's box of Christmas goods. Other corks, perhaps, will slip down into the bottle all over, and then a good deal of the time will be spent in trying to fish the cork out of the bottle, when the whole thing is worth less than five cents.

You may say, that inefficient hands should not be set at such work. I agree with you; but here are hundreds who are teasing for work, some of them saying, "Please, Mr. Root, give me something to work at." Now, I know what a task it will be to teach all these young people to be handy, but they do not, nor can they comprehend why I should pay some, no older than they are, a dollar and a half a day, while I offer them only 75 cents. It is simply because they do not know how to do things, and have not yet learned what is safe for them to undertake to do.

Another point comes in here: We have hands all over the establishment who are doing rapidly and well the work they are accustomed to do. A hand crates a package of ten hives in perhaps fifteen or twenty minutes, so that it does not cost over five cents at the outside for his work on it. Now, instead of wanting ten hives, some individual decides that he must have just exactly seven hives, or twelve, and insists on having them put up just that way. Very well; as we do not want to seem to be disobliging, we agree to do it for him. But, seven hives may cost us nearly as much as a package of ten, before we get through with it. And this is because he was unwilling to take regular goods in regular-sized packages. Another friend wants hives made just one inch longer than our regular ones; and if we tell him we shall have to charge him double price for adding the single inch, he gets offended because we do not want to take the trouble to be accommodating and obliging, as it seems to him. My friend, have you accustomed yourself to being a handy man or woman? If you have not, just set about it this day, and it will not only put money in your pocket, but it will enable you to ease the trials of life more than you can tell.

BEE CULTURE IN MAINE.

I STARTED in the spring with 3 colonies; increased by natural and artificial swarming to 15, with about 30 lbs. of box honey.

METAL-CORNERED FRAMES.

I see some complaint has been made lately in regard to metal-cornered frames. I have used them almost wholly the past season, and am so well pleased with them that I shall use them in the future. I want a frame that I can pick up without having to pry loose, and jarring the whole hive; and on this account I can handle the metal-cornered frames with fewer stings. I have almost dreaded to open hives with all-wood frames, as there is so much prying loose to do, and that takes time, which is always valuable. Some complain of the ends of corners tipping up; but this, I think, will not happen if they are well clinched down.

The frames I use have an additional wire, at each end of the frame; this wire comes within about ¾ of an inch from end-bar, making 8 perpendicular wires for L. frames. This additional wire holds the foundation more firmly in place, and prevents the foundation from warping around, as it often does without this wire. These frames were obtained of W. F. Falconer, but I do not know whether the invention is his or not; and, by the way, let me say here, as Mr. F. is one of your advertisers, that he has filled all my orders promptly, and with first-class goods.

OUR STATE FAIR EXHIBIT.

At our State Fair, held in Lewiston, Sept. 18 to 21, there was a good exhibit of bees, hives, and apiarian implements, which eclipsed all former exhibits. Among the first premiums awarded were, one colony pure Italian bees, J. B. Mason, Mechanic Falls; best collection of queen bees, do.; largest collection of apiarian implements, Lucian French, Dexter; largest display of comb honey, G. W. P. Jerrard, Caribou. Mr. French is a veteran bee-keeper, of over 70 years, and manifested as much zeal as any one present. He had on exhibition one of A. I. Root's foundation-mills, one of the first out, and received first premium on foundation. G. W. P. Jerrard is one of the honey-kings of Aroostook Co. He has 300 swarms of bees, and gets 3 tons of honey per year. When asked how he managed to get his honey sealed so nicely, he said, "I keep black bees mostly, and prefer them for honey, and Italians for increase." That Mr. J. can raise something besides bees and honey, is shown in his large display of vegetables and farm products, grown by himself. Aroostook honey is the whitest and best in the world, so Aroostook people claim; and those who have seen and tested it are disposed to agree with them. Their greatest honey-producing plant is fireweed, or *Epilobium angustifolium*, which grows in great abundance. Raspberry bloom is also very plentiful, and bushels of the berries are canned there yearly. Aroostook County embraces the whole of northern and part of eastern Maine, and contains 6800 square miles. The land is rich and fertile, and is termed by many the "New West." Enormous quantities of potatoes are grown there, the larger part of which are manufactured into potato starch, of which 7840 tons are yearly produced.

A VETERAN BOX-HIVER.

There lives near me a box-hiver of 85 years of age. He had at one time 80 swarms of bees in box-hives. These were not kept in one locality, but were let out on shares to different parties; but one or two poor seasons, followed by hard winters, killed them off, so he has only two hives remaining. His heavy loss at one time he attributed to his neglecting to inform his bees of the death of a member of his family.

W. Auburn, Me., Oct. 24, 1883. E. E. CRAFTS.

HOME-MADE IMPLEMENTS.

SOME VALUABLE IMPROVEMENTS AND SUGGESTIONS FROM FRIEND EASTERDAY.

FRIEND ROOT:— I send you with this a lot of sundries.

A LITTLE SHOVEL FOR CLEANING OUT HIVES.

No. 1 is a 5-cent garden-trowel with the point cut off, which I use for scraping the inside of hives, top of frames, etc. I find it a cheap but useful tool.

THE SELF-LUBRICATING PARKER MACHINE.

No. 3 is an improvement on the Parker machine. The *trough* is to hold the lubricating fluid. I will allow you to judge of its utility.

HILL'S DEVICE.

No. 4 is a cheap way of making the Hill device. To make the curved splints, I took a piece of tough elm board, which had been soaked in water, and sawed kerfs in one edge 5 in. apart, and then with a single-bit jack-plane, set deep, I cut them off ready curved, "faster than you could count." I suppose any kind of tough, straight-grained wood would do.

No. 3 is a wired frame, showing the way I do it. I could say much in favor of the *size* of frame and section I use, but I suppose it would be useless, as you would still persist in making your *odd sizes*.

DRONE FDN. FOR SECTION BOXES.

No. 6 is a section with a drone foundation starter partly drawn out. This leads me to say something about drone foundation. I have often noticed, especially when honey was coming in fast, that, if the starter did not fill the section, the bees would fill it out with drone comb. I concluded last spring that, if they preferred drone-cells for surplus, I would furnish them with that kind of foundation. I used about 40 lbs. this season, and have watched the result. For some reason, probably because less heat is required, bees rear their drones at the outer edge of the brood-nest. This habit causes the queen sometimes to lay in sections filled with drone comb, when she would not lay in them if filled with worker comb. Drone comb does not contain so much wax to the pound of honey, but the cappings do not look so white as worker comb.

During a good honey-flow I put on several rows of sections, filled alternately with drone and worker fdn. I found the worker was drawn out first, had the first honey, and the sections were best filled. I noticed all through the season, that sections with drone comb were not built down so well as the others. Although the bees never tried to change worker to drone, yet when the honey-flow became slack they tried very hard to change drone to worker, as you will see by the inclosed sample. I think hereafter I shall use only worker foundation.

MY REPORT.

Lost 20 % in wintering. Increased 60 % by natural swarms. Took 148 lbs. comb honey per colony, spring count. Honey all sold. E. S. EASTERDAY.

Nokomis, Ill., Oct. 25, 1883.

I will explain to our readers, that the point of the 5-cent garden-trowel is cut off squarely about two inches from the point; and as this trowel is made of iron, and not of steel, it is an easy matter to make the shovel end square, so it will fit the bottom-board, and with a file and grindstone it may be made sharp. As the price is so insignificant, and it is a nice little shovel with a good convenient handle, it is certainly an ingenious and valuable idea. — The improvement for the Parker machine is made by excavating a little trough, filled with starch or honey, in the lower block of the machine. It is cut in at the right spot, so that when the lever is drawn back the corner can be easily dipped down in the lubricating material. It seems to me quite an acquisition.—The cheaper way of making the Hill device is indeed wonderful; but after friend E. explains how he does it, I am sure it can be done easily, and I do not know why the Hill device is not just as good as those we get out with circular saws. It might get jammed out of shape by careless bee-keepers, it is true; but bee-keepers have no business to be careless.—His frame is wired by simply running the wires diagonally up and down, back and forth, and the arrangement will no doubt answer nicely to keep the fdn. from sagging; but it does not prevent the top and bottom bar from sagging, as our method of work does. — The section with the drone fdn. in it partly worked out, demonstrates pretty conclusively that drone comb is not the thing for comb honey, when the yield is moderate. The bees have really made worker comb on drone fdn., but they must have done it at quite an expense, both of labor and material. I think hereafter we shall send no drone comb for starters, unless it is specially ordered. — Many thanks, friend E., for the valuable hints given; and especially for the important facts you give us in this matter of drone or worker fdn. for section boxes.

SOME ITEMS FROM FRIEND MICHENER

HOLY-LANDS CROSSED WITH ITALIANS.

I SENT out my last queen for the season to-day. Queens all sold, orders all filled, nuclei all united. We have been very successful sending out queens this fall. After the weather gets cool we put in from 20 to 25 bees; use nothing but candy; sent one safely to H. F. Hunt, Quebec City, a short time ago. We go into winter with 58 colonies, unless we sell a few more. Will winter half in chaff hives and half in cellar. We did not make holes through the combs this fall, as those that had none last winter wintered as well as those that had; and in place of sticks of wood over the frames, we are going to use sticks of candy—not that they are short of stores, but just to save their stores a little, and the candy will absorb the moisture, which will soften the candy so the bees can use it. There you have got the secret. Bees can be wintered with very little honey this way in a good cellar or good chaff hive (mine are just like yours, only I use shingles for covers) with a small amount of candy at a time laid over the frames. Loaf sugar cut into squares as we buy it is just as good as candy. We can place the candy in the shape of a Hill's device, you see.

This has not been a very good season for honey on this Niagara peninsula, at least near Lake Erie, although our best Holy-Land stock (we think the queen was mated with an Italian drone) filled every section in the upper story of a Langstroth chaff hive, although a few were not capped nice enough to sell. I agree with friend D. A. Jones, that "Holy-Land bees and their crosses" are the best. They will gather more honey; they are quite nice to handle, if managed right, and in cool weather they will scarcely stir off their combs, while hybrids and some Italians are perfect furies in cool weather. Neither will they leave their hive to chase their enemies on such slight provocation as other bees will; and while they remain spread out over their combs when lifted out of the hives, they can be shaken off, almost every bee.

THE HONEY-PEAS.

The Southern cow-peas, sent me by W. H. Greer and Dr. T. J. Happel, way down in Tennessee, did not produce many peas, or blossoms either, and the bees did not work on them at all. They grew well, but I suppose the weather was too cool for them to come to perfection. The small amount of Russian-sunflower seed you sent me in a sealed envelope produced two bushels of seed, but the flowers produced no honey. It is a sort of gum, or propolis, the bees gather from them here. ILA MICHENER.

Low Banks, Ontario, Can., Oct. 29, 1883.

FIXING THE BEES FOR WINTER, ETC.

ITALIANS AND HYBRIDS.

NOW that the bees have been idle for a number of weeks, and as another long winter is near at hand, I can not but feel a love for them. I started with 11 swarms last spring; have made 12 nuclei, and raised 34 queens with best of success. I have taken 200 lbs. extracted and 100 of box honey; and if I had raised no extra queens, I could have taken 200 more, I think. My main success depends upon laying queens at all times, and fdn. I doubled my nuclei down (which were all strong in bees), and now have 34 stocks in fine condition.

I like a woolen cloth next the frames, or rack, best; but in its absence I use burlap, and a few sheets of newspaper on this. I know some doubt the idea of paper, on the grounds that the moisture will not pass up through; but last winter's experiment satisfies me that it does; and the stock with an old burlap that was perfectly gummed over, with 3 heavy woolen cloths, and good full fine chaff cushions, all on came out the very best. The next best had 3 sheets of paper and cushion; the one that died first had one thin woolen cloth, and top story ⅔ full of chaff; and the ones that were covered first by snow came out the best and strongest.

HYBRIDS FOR HONEY.

There are as many ideas as to wintering as there are different bees. W. Z. Hutchinson has tipped the balance in favor of hybrids. Girrard, of Aroostook, had the Italians, but sent them 10 miles away so as not to mix his blacks, for he said all they would do was to swarm, and give him no honey. He truly had a big show of box honey at our State fair this fall. Many like the Italians because they stick to the combs so nicely, and so they do; and when we extract, *don't* they stick too? I can extract 2 hives of hybrids to one Italian, and not spread them about the hive half as much as the Italians, and they will do double the box work of Italians; and when I work at extracting all day, from nearly all hybrids, and get but one sting, I don't think they are so very bad to handle. I am not denouncing the Italians, but I think color has had too much weight in the matter. When experienced breeders tell me that they have paid $8.00 for an Italian queen, and, after testing her, sold her for $1.00, it looks a bit one-sided. Don't think, friend R., I am finding fault with the queen you sent me; I am not; she is all I could ask, and bred up a good swarm after the 24th of June; but she stopped laying sooner than some of the hybrids, though many claim they breed later. Probably that $8.00 queen was an in-and-in breed, which gives more chance for lazy Italians than with hybrids. I have doubts about raising queens another season, for it is expensive, though a grand school, and very interesting. I must say, all I raised and use, are doing all I could expect, as to handling, etc.

E. P. CHURCHILL.

No. Auburn, Me., Oct. 29, 1883.

BEE - NOTES FROM THE BLUE RIDGE.

BOTTOM VENTILATION.

MY article in Oct. JUVENILE would read better by saying "four-inch," in place of "four-*nick* V-shaped entrance." Bottom ventilation is certainly best, as the warm air is forced downward very slowly, and dispelled by the respiration of the bees, drawing the cold fresh air up gradually, causing a minimum condensation of vapor.

GRANULATED-SUGAR FEED.

The fall of 1882 in this part of the mountains was a very wet season, which prevented much nectar secretion, and the bees from gathering even the little that might accumulate. When the time for preparing the bees for winter arrived, I found the most of my colonies almost destitute of stores. I made granulated-sugar syrup, and fed till all had 25 lbs. to the colony. Bees never wintered in a better or more healthy condition. As spring advanced I fed each hive a small portion of syrup two or three times a week; and when flowers began to bloom it was a pleasant contrast to see the strong army of workers pouring out of my hives, and note the feeble, languid movements of the decimated stocks of the patrons of the gum and box hives.

ITALIANS AGAINST BLACKS.

The bees of these mountains are the large brown bees, of which we hear so much commendation. If they ever possessed any special merit, the branch of the family which has sojourned here these many years has lost it and degenerated into *scrubs*, like the farm stock of the country. They cut a sorry figure beside the Italians, which would be out in the morning, bright and early, off to the fields long before the blacks were stirring; and in the afternoon the blacks seemed to *tire;* and as sundown approached they would move around slowly—longing, apparently, for darkness to come, the Italians keeping up their busy labors till the gloaming put an end to their tireless industry.

BEES WORKING FIVE MILES FROM HOME.

There has been considerable said in GLEANINGS about the distance bees would fly in search of honey. I had a favorable opportunity of testing the matter to some extent the last season, as there were no Italians within perhaps fifty miles of this place, except those I owned; and although there was an abundance of white clover and other bee forage in and around this plateau, the Italians were found working on the clover in the coves four and five miles distant. To reach those feeding-grounds, the bees had to ascend 300 or 400 feet in a distance of three-fourths of a mile over the ridges; and then in plain view, three or four miles distant, and a thousand feet below, lay the tempting white-clover fields. After the little fellows had secured their loads of nectar, rising a thousand feet in the air in order to clear the crests of the ridges which lay between them and their hives, must have been an exhausting labor. But, why do bees go so far when abundance of bloom is in immediate proximity to their hives? They must scent the perfume in the air, and follow it till they alight among the flowers.

PREPARING BEES FOR WINTER IN THE MOUNTAINS.

The wintering problem, which gives bee-keepers so much trouble further north, presents no difficulties to the apiarist here. Provide the colonies on their summer stands with plenty of stores; contract the space to suit the size of the colony; place some strips of wood across the frames, and cover with a few folds of burlap or woolen cloths; fold some old newspapers, and press down snugly over all, to keep the heat from escaping; place the cover on, and the job is finished.

HEDDON'S PLAN NOT RELIABLE.

I gave Mr. Heddon's plan of transferring on frames of fdn. a pretty good test last season, and the result proved, though new, that it is not an improvement on the old one. The first trial, I drummed the old hive what I considered very thoroughly, for 20 minutes; but the bees, when emptied in front of the prepared hive, and forced in, showed, by unmistakable signs, that it was not to their liking; and notwithstanding the thorough drumming they had received, the queen had not been dislodged, but remained in the old gum. They soon began to leave their new quarters, and go in with another black hive in the yard, whose occupants were nothing loath to receive them, even placing a band of musicians at the entrance to invite the immigrants in. (I think when bees enter a stange hive with full sacks, they are always welcome.) Covering with a sheet the hive to which they were deserting, I placed their old gum near the frame hive they had been transferred to, and, ah! what a joyful hum was immediately set up, as the column took up its line of march into their old quarters. The gum was placed on its old stand, and another one tried with similar results.

A neighbor had a solitary gum which he wished transferred, and the next day I concluded to try them on the new plan. After driving as many of the bees up into the drum-box as possible, I turned them out at the entrance of the frame hive, which had been previously furnished with combs, but the queen was evidently behind; so, placing the drum-box on, I gave the old hive some more smoke and pounding; but the second installment of bees, when turned out of the drum-box, did not mend matters, for the queen still persisted in sticking to her old quarters. I was determined to drive every bee out of the gum, if need be, and a third trial proved that I had at last routed her majesty, and the colony finally accepted the situation, but with evident reluctance, leaving their warm combs, honey, and brood, to occupy new quarters in a cheerless, empty hive, on dry combs. I allowed the brood to hatch out in the old gum, and in a month or so transferred the colony; but it turned out poorly, and proved of little account.

Determined to give the new plan a still further trial (having succeeded in the last attempt after a good deal of *persuasion*), a day or two after, I tried the first gum again, this time in the evening. I gave them a most thorough drumming, using two drum-boxes, covering the first exodus up till I drove the residue out, and then emptied all in front of the hive prepared with fdn. The bees were any thing but pleased with their cold quarters, but I forced them in; and as darkness closed down, they had no alternative but to remain.

The next day the bees went in and out of their new abode, but there was no work going on, and I noticed that the old hive, which had placed a band of musicians at the entrance on a previous occasion, seemed to be lively, and the bees numerous. In the evening I opened my newly transferred hive, and, lo! it was empty. I then opened the hive which had presented such unusual activity through the day, and it was crammed with bees from bottom-board to cover. I gave them a second story and a case of sections, and the double colony went to work at once in the boxes.

The bees evidently do not take kindly to Mr. Heddon's plan of transferring, and have a decided preference for their old combs and brood. It matters but little whether the queen goes up in the drum-box or stays on the combs when they are to be placed in the new hive. When the combs and brood are placed in the frames in place of fdn., the bees enter and go to work cheerfully, which they do not when forced to leave their brood and go on to empty combs or fdn. Mr. Heddon objects to having these old combs in his apiary; but old combs are a pretty good institution in many respects. Their thick walls, crevices, and caverns, make excellent warm winter quarters for the bees; and when empty they can be pushed to the outside, or taken out of the hive, and their places filled with frames of fdn.

DOUBLING COLONIES FOR THE HARVEST.

By the way, would it not be a good plan, at the commencement of the honey harvest, to unite two colonies, taking one of the queens and holding her in a nucleus till the rush is over, and then divide, giving the bees back their old queen with her little family? E. E. EWING.

Highlands, N. C., Oct., 1883.

WORK FOR WOMEN.

I HAVE an aunt who became interested in bee culture a few years ago. She is now a widow. She and her two boys have been looking after a large farm and a good-sized dairy. In addition to all this she has not neglected her bees. In a letter received to-day from her, she writes:

"I think you have done splendidly with your bees. People here think I am doing wonders with mine, but I refer them to you. I got 700 lbs. of comb honey, about half of which is in section boxes; had 11 colonies in the spring, and 20 now. But I see that I might have done far better if I had not had so many irons in the fire. We had four boarders ten weeks, when I ought to have paid more attention to the bees. But I intend to do better next year; if I live and keep my health, and the girls stay at home, I shall try to see what I can do. The more I have to do with the dear little pets, the better I like them. I am very thankful that there is *one* thing a woman can do herself, without the help of a man. And when I see so many women dragging out a miserable life of poor health, and whining for money, I feel like saying to them, 'Why don't you get up and *dust*, and do something in this wide world, when there is so much to do, for both profit and pleasure?' But they are afraid the bees will sting, and they will have to make some quick motions; so they stay in the house like little ladies, or take their exercise on the street, gossiping, and trying to talk politics, and electioneering for their husbands, so they will get into office. Bah!

"Well, enough of this. I must go to town with the butter, and take my rags to the weaver's for my new carpet."

That answers the question, "What can she do?" better than I can answer it; and as the pins stuck so neatly in some of the "gentler sex" are driven home by one of their own number, it relieves me from the awful consequences that might follow, if I had done it. The above quotation is respectfully dedicated to those of your readers who need an additional spur to activity. EUGENE SECOR.

Forest City, Iowa, Oct. 27, 1883.

HOME-MADE ONE-PIECE SECTIONS.

SOME VERY PLAIN INSTRUCTIONS FOR THE UNINITIATED.

OUR enterprising friends of the Louisville *Farm and Fireside* have given so good an article on section boxes that we reproduce it entire. They have also been kind enough to loan us the engravings:

Sections are small frames to contain single combs of honey. As these appear upon the market with their sweet contents unbroken, white and beautiful, they have become very popular. The purchaser obtains a pound of honey, neatly cuts it out of the frame upon a plate, and it is a dainty dish to set before a king.

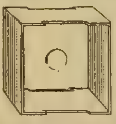


FIG. 1.—SECTION-BOX.

I have been making very good sections from Leslie berry-box material. I purchase a crate of twenty-four boxes, in the flat, for 16 cents, and this is sufficient to make 48 sections, with the crate material and bottoms thrown in. A strip for one of these quart-boxes is first slit from end to end, through the middle; then each part is doubled around and nailed with two small tacks. The frame thus formed is shown in Fig. 1, and is just large enough to contain one pound of comb honey, being 4⅜x5⅝x1⅝ in inches. [The usual size of these sections is 4¼x4¼x2, outside measurement.—EDS. F. and F.] As this material is only about one-twelfth of an inch in thickness, the frame is quite frail until strengthened by the comb itself.

Now, what is the best method of using sections in the hive? I have experimented a good deal, and examined most of the racks and contrivances used by bee-keepers. The following described box, however, devised by myself for my cottage hive, but just as convenient for any other, all things considered, suits me much better than any thing else. These boxes are small crates, holding, for my hive, six sections each. They are movable and firm, and easily packed away or carried to market. A quilt may be used over the brood frames, and turned back for one after another of these little crates as they are needed.

Sections are often suspended alongside the brood in broad frames, but I do not like this method as well. I prefer to narrow the space below, down to from sixteen to eighteen hundred cubic inches, according to the size of the colony, by division-boards, so that the bees may be ready to work in the supers early in the season.

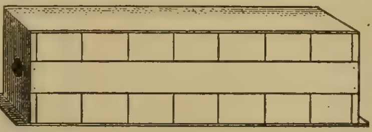


FIG. 2.—SLATER'S SECTION-CRATE.

The bottom-board of the crate is provided with a central opening for admitting the bees to the sections. The ends are nailed upright upon this bottom, far enough apart for the desired number of sections to stand between. The ends and bottom I get out of common siding, which I first carefully narrow down to the exact width of my sections. Inch-and-a-half holes are bored in the end-pieces a little below the center, over which glass is placed for observation. Fig. 2 is a side view of the section-box complete, with thin strips tacked on the sides and top, which are easily removed. Tin or thin wood separators may be slid down between the sections, the ends resting upon the side strips of the crates. With pieces of old comb or foundation placed in the upper part of the sections for starters, the bees will generally fill them out with exquisite neatness.

Judsonia, Ark. F. A. Slater, A. M.

In addition to the above, the editors write as follows:

In addition to the above-described crate, we present two others which may have points of convenience for some of our subscribers:

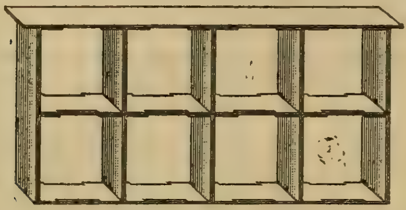


FIG. 3.—SECTION-FRAME.

Fig. 3 represents the ordinary section-frame—a frame made of stuff one-fourth inch thick by two inches wide, and of the same length as the frames used in the brood-chamber of the hive. The frame represented is the standard Langstroth size, and contains eight one-pound sections. These sections are now largely made by machinery, with the ends dovetailed together, and for many persons those thus made will be preferred to such as can be made at home, as they are sold by the thousand at half a cent each. Each section should contain a "starter" of comb foundation, and seven of these frames, containing 56 sections, are put into the surplus chamber of the hive at once, with no honey-board, so that the bees have ready access to them. The objection to this arrangement is, that when the honey-flow is not strong, and especially late in the season, it is sometimes desirable to put on fewer sections at a time. For this purpose the crate described by Prof. Slater is excellent. Mr. J. W. Newlove, of Columbus, Ohio, manufactures a modification of this crate, which is shown in Fig. 4.

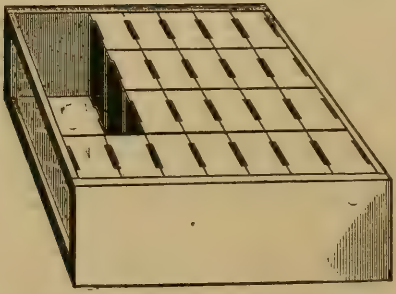


FIG. 4.—NEWLOVE'S SECTION-CRATE.

This crate is of proper size to cover the whole top of the hive, and to contain, for the standard hive, twenty-eight sections. It has a glass in the side for observation, and its "bottom-board" is simply a series of thin strips ⅜ inch thick by 2 inches wide, and so arranged as to support the ends of the sections, three of these strips, with a narrow cleat on each side of the crate, serving for the size shown. Mr. Newlove makes his crate a little larger than the space occupied by the sections, and fills the spaces thus left with strips cut wedge-shape. By removing these strips the sections are readily taken out. With both Newlove's and Prof. Slater's crates the surplus space may be regulated to better advantage than with the section-frames, as these crates may be lifted, when partly filled, and empty ones slipped under—an operation which will stimulate the bees to increased activity, instead of discouraging them, as the taking-away of their surplus often does.

CALIFORNIA WHITE SAGE,

CAPTURED AT LAST.

THERE has been quite a little discussion as to what is the true white California sage, and as to just what it is like. We give below a letter in regard to it, from our old friend Pryal:

I have had executed, during the past few weeks, per order of the editors of Vick's *Monthly Magazine*, several sketches of the white sage. They were made by a first-class artist, under my personal supervision. They show the entire plant in full bloom in figure 1. In figure 2 are a couple of stalks showing flowers and leaves in their natural shape. Fig. 3 shows a section of the stalk so that the flowers may be seen in their natural size, which shows their curious flowers. The drawing is very artistic and truthful; and if the engraver does it justice, it will make a nice full-page cut. I had it arranged so that electros could be made from it in such a way that the plant, and section of stalk and flowers, would form two separate cuts.

The Pacific *Rural Press* cut, seen on page 301 of Gleanings, was made by the photo-electro process, which doesn't do for flowers. W. A. Pryal.

North Temescal, Cal., Aug. 25, 1883.

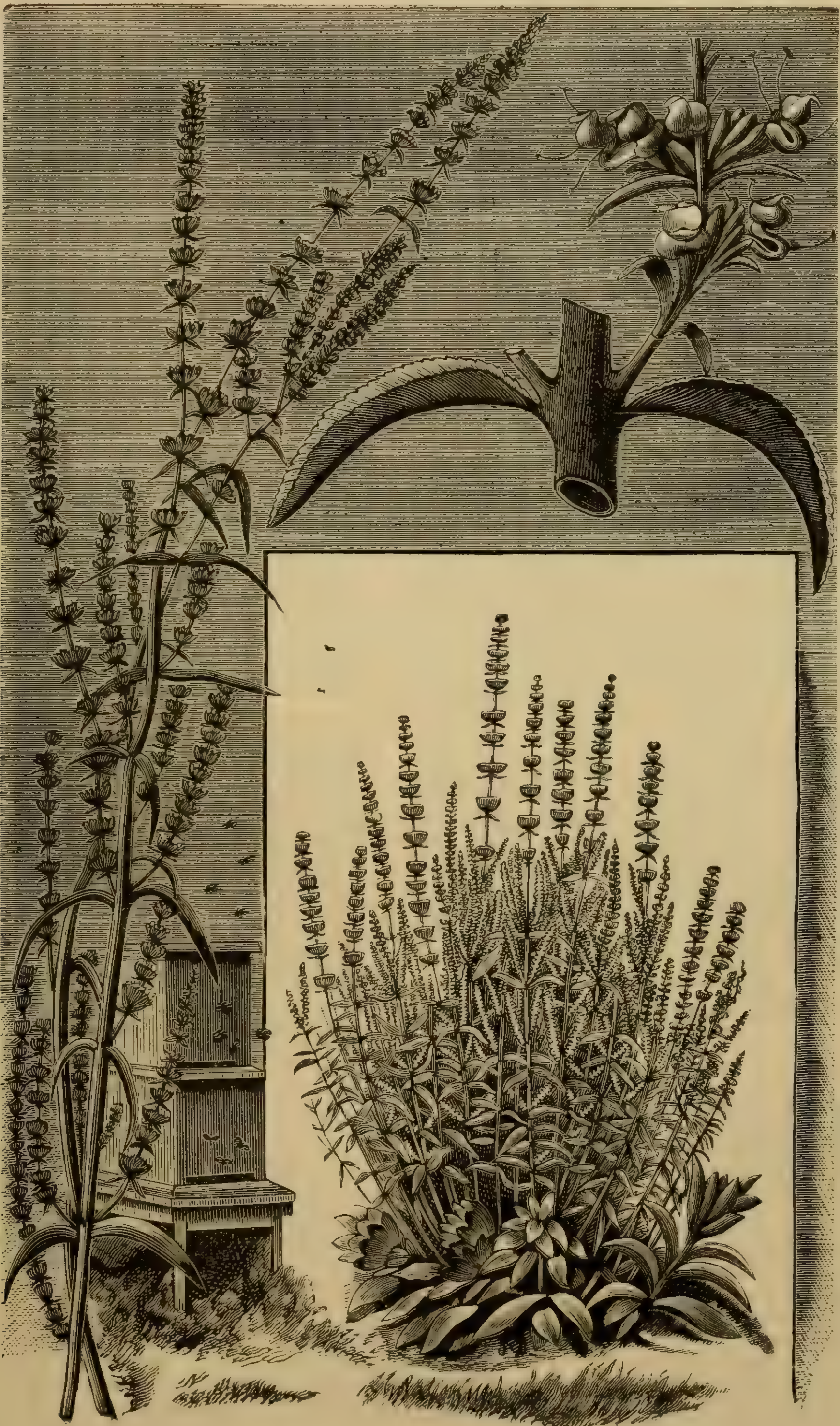
The following is an extract from Vick's *Monthly* for October:

THE WHITE SAGE.

Few, if any, floral publications have done more to bring the true characteristics and merits of California trees and plants before the public than have those of James Vick. That true lover of Flora's gifts visited the flowery vales and mountains of that State, and on his return home was never tired of talking and writing of the countless acres of brilliant floral jewels he saw there. We are pleased to see that his successors are following in the footsteps of their father. California owes them lasting thanks, and is always ready to bestow them.

The products of the State are so varied, and of such superior merit that her people, as also those of other climes, can not help but praise them. Her specimens of the vegetable kingdom are often really wonderful, and then the quantity is still as surprising. Once the "land of gold," she passed successively to the land of wheat, of the grape, of flowers, of fruit, of milk, and of honey, and in a wondrous degree combined them all as no other country could. Her gigantic trees have been gazed at in astonishment by people from all shores; her gold has enriched many, while it has found a place in the pockets of every civilized being in the world who had the least desire of possessing the golden shiners, and who among men has not had that wish? Her plump wheat has crossed the wide seas to feed the hungry of the Old World. Her brilliant and many-hued flowers are adorning the gardens of the great and the humble in all quarters of the globe, and in the gardens of the peasant they luxuriate to the same degree as they do in the gardens of kings. Her fruits have of late years gone far and wide; they receive the same praise that her precious metals, wine, trees, grain, and flowers do.

As it would seem, California wonders never cease. Scarcely a decade has passed since the busy bee revealed the fact there bloomed on the almost desolate hills and mountains of the southern part of the State an unpretentious flower that secreted nectar more copiously than the flowers of the thyme on Mt. Hymettus did in days of yore. When the news of this newly discovered bee Arcadia reached apiarists in the north, the east, and the south, the star of bee culture at once took its course westward, where gold-hunters had, a quarter of a century previously, built up a prosperous State. In a few years numberless colonies were sending out their innumerable workers to harvest the nectar which for ages past had been wasted on the desert air. The climate—in fact, every thing—rendered the country a paradise for bees, and they gathered such quantities of honey that it soon became an article of export. Ships were called into service to transport the de-



THE WHITE SAGE OF CALIFORNIA.

licious nectar to all parts of the world, and in return therefor the State received thousands of dollars, and a reputation for excellent honey enjoyed by no other place in the world. This seems to be in the natural order, "Excel in all things, fail in none." Like the flowers, fruit, and wine, the luscious nectar found a welcome entrance into the homes of the sovereign and of the peasant. Royal teeth have crushed the dainty waxen cells, to the great delight of the owner. The poor invalid desires no pleasanter food or medicine than this aromatic honey.

The flowers from which so many hundred tons of honey have been gathered in the lower part of the State of California are those of what is now commonly called "California honey sage." The one herewith shown is the true white sage, *Audibertia polystachya*. Several species of Audibertia are found on the coast, but we have chosen the above for this article, as it is the most striking in appearance, and differs in inflorescence very much from all the others and from the genuine sage. It has a very highly aromatic odor, and this, with its other peculiarities, makes it, when once known, easily recognized anywhere.

Figure 1 shows the plant in full bloom, and as grown on good soil, though not by any means above the average. On moderately rich and moist land it will keep up its efflorescence from June till Christmas, or till heavy frosts, which may be in January. On the dry hills and mountains in its native home, its season of blooming is much shorter than on either moist or cultivated lands.

On account of its being a great nectar-secreting plant, and because its season of efflorescence continues longer than most other plants, it is of great value as bee pasturage. The plants are of easy culture, and will thrive on drier soil than will many other honey-producing plants. The writer is firmly of the opinion, that this plant will grow well in all the most southern of the Southern States, and will yield large quantities of nectar. Its easy culture should be sufficient inducement for all who plant for bee feed to give it at least a trial. The writer has cultivated it near Oakland, Cal., and finds that it grows exceedingly well, and is visited by bees in large numbers from morning till night. It seems never to know when to stop blooming. On account of its striking appearance, it makes a good plant for the garden, and to try it we have it so planted. Its whitish-blue leaves and tall spikes, sometimes from six to eight feet high, give entire satisfaction as individual plants; but where grouped they do not grow so tall, and are still more beautiful. The plant from which the accompanying sketch was made is one raised by the writer on rather dry soil.

In conclusion, we would advise all bee-keepers in this State, and those of the Southern States above mentioned, to sow a few seed, and every year to assist in disseminating the same in their neighborhood, so that in a few years large patches of white sage may be found in the hills and valleys. This done, such a thing as a short honey crop will be a thing of the past.

ANOTHER MARVELOUS REPORT FROM AN A B C SCHOLAR.

FROM 4 TO 20, AND 3110 LBS. OF COMB HONEY.

SINCE becoming a subscriber to GLEANINGS, I feel as though I had become also a member of your large family of "Blessed bee-keepers;" and though but a baby in the business, I want to send in my report, which I have not yet seen surpassed.

I began last year, 1882, with one swarm of Italians; increased to 4, to start the spring; they began swarming in April, and increased to 20, and so now remain to go through the winter, which is a simple business here.

And now for my returns: I find by looking at my book that I have taken 3110 lbs. of comb honey, all from upper boxes, or caps, as we call them. I have no extractor, and did not take any honey from the main hives, which are very full. Our first shower for five months came in the end of September, since when the bees made no more surplus honey, but turned their attention to glue-making, and preparing for winter. I inclose a sprig of plant from which they make most of the late honey. What is its name? Alfalfa was the main source of supply.

GEORGE HOBLER.

Hareford, Tulare Co., Cal., Oct., 1883.

Friend H., your report is truly wonderful, and I presume we shall have to conclude that your favored clime has something to do with it. However, since the other bee-keepers of your State have not reported any thing extra during the present season, I presume we shall have to conclude something is due to you as the guide and architect to this wonderful achievement. We should be very glad indeed if you would give us the full details, step by step, how it was brought about. We are very much obliged indeed for what you have said in regard to the sources from whence the honey comes; and especially are we glad to hear such a tribute to alfalfa. If it does not yield honey here, it certainly must do so in California. We will report further on in regard to the plant you send us.

ITALIAN BEES.

BY MRS. HANNAH RINEBOLD.

'Tis on a warm October day,
The air is balmy, soft as May.
That old Jack Frost painted bright the leaves,
But left no food for eager, busy bees
That fain would work these sunny hours;
There's nothing left but withered flowers.

But in the house I hear a buzzing sound,
And wonder what it is they've found;
Oh! 'tis a tiny piece of bread,
That was all o'er with honey spread;
And ere we know what they're about,
They've taken all the honey out.

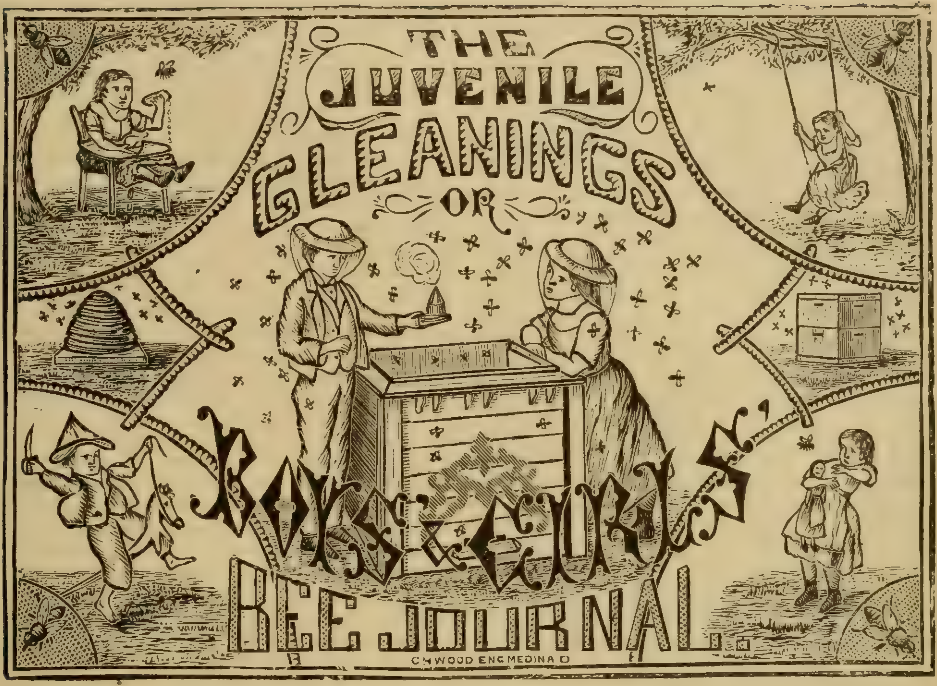
With new recruits they still are coming in;
Don't they know, the thieves! that robbing is a
sin?
They're in the cupboard, over all the shelves —
What shall we do with all these vexing elves?
Oh! were there ever any rogues so bold
As those that wear bright bands of gold?

Then on to the windows they buzz up and down,
Till, tired out, at last they fall down,
Unless we remove them by their bright wings,
And let them fly out again, naughty wee things.
O Uncle! what shall we do with such bees,
On sunshiny days such as these?

Owing to the early frost that killed the buckwheat and goldenrod (our late honey-plants in this place), the honey crop was not very large, although there was quite an abundance of white clover earlier in the season. We have 23 colonies of bees, 11 of which are Italians. A near neighbor put some sugar on his window, to see whether the bees would find it. They found it. He didn't care to repeat the experiment. The Italians come into the house every warm day, but the blacks do not.

Overton, Pa., Oct. 15, 1883.

In the first place, my friend, raise all the windows about an inch, and the bees will all get out; then cover up, or carry out, every drop of exposed honey, and let them satisfy themselves that no more is to be had, and they will soon settle down quiet. — Many thanks for your pleasant and vivid "pen-picture" of Italians after stolen sweets.



He that is faithful in that which is least, is faithful also in much.—LUKE 16:10.

MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10:29.

Charity suffereth long, and is kind; charity envieth not; charity vaunteth not itself, is not puffed up.—I. COR. 13:4.

IT is nice to have neighbors. Don't you think so, my little friends? And it is nice to have *nice* neighbors. Are your neighbors all nice ones? or do you talk about them and make fun of them, and, when you sit down to dinner with the whole family, make it a business to talk about the faults of your neighbors? Well, I am pretty sure you do not; in fact, I begin to feel a little guilty myself for just suggesting the idea. If any of you do get into a habit of talking about your neighbors, remember it is a very bad fault, and a very great evil. I know by experience. I am sorry to say, that it comes very natural to me to talk about the faults of my neighbors, and to tell about the trials I have to endure. But I have always noticed this: That I never feel happy after having discussed the shortcomings and failures of my neighbors. I do not know why it is, but this tendency seems to be almost universal, to talk about others. Even Christians fall into the habit, if they do not look out, of talking about other Christians, and saying, "Why, Mr. So and So is a professor of religion, and yet gets mad, and scolds;" or somebody else, although a member of the church, hardly ever goes to meeting. Another one does work on Sunday that he does not really need to do; or still another cheats in trade. Such things may happen; but I tell you, friends, it hurts us to talk about it. Of course, I mean to talk about it to somebody else, instead of the one who is doing wrong. Now, then, what are we to do? Whenever you feel tempted over the way somebody else has done or acted, just go right to him, and in a kind, friendly way, talk to him about it, and see if you do not feel happier. If after you have made up your mind that you will go and talk to him about his wrong ways of doing, you conclude the matter is too small to mention, or make any fuss about, then please do not mention it to anybody. If you feel pretty sure it would do no good to talk to him, or for some reason or other you think he would not take it kindly, just tell God about it, and pray to him that your friend may do better. Don't you know how our friend the old gray-headed Samuel said, in one of our recent Sunday-school lessons, that he should sin against God if he did not pray for the people? Now, then, friends, about the neighbors.

I do think it pleasant to have near neighbors; yes, and I think it pleasant to have a good many of them. If they are not just what they ought to be, you can help in working and praying for them, and in making a life-study to make them better. If they are good, kind, Christian people, then you have plenty of earnest helpers right near by you in the time of need. You see, a Christian has a right to be happy in any case, no matter whether his neighbors are good or bad.

A few days ago, when I was taking my

dinner in the new lunch-room, all at once it came over me what a pleasant thing it is to have so many pleasant neighbors. We have now a number of tables in our lunch-room, and the boys and girls gather about these tables in groups while they take their dinner. They all seem to be pleasant and cheerful. Our room is bright and new and clean. While a part of them were seated at the tables, some more of them were officiating as waiters, and others still were in the kitchen preparing food. But it does not make any difference where we are, or what we do. We are all one family, and there is little if any disposition to feel above our shopmates. When I looked over them all, and noticed the pleasant and kindly feelings that existed, I could not help the thoughts that welled up in my heart, of thanks to God. The rooms are warmed by steam, so it is pleasant and comfortable inside, even if it is stormy and unpleasant outside. Mr. Gray has made the counter-store and lunch-room so that they open into each other — at least, there is only a broad archway that separates them; and while we were eating, we could catch a view of the pleasant faces of those in the counter-store. What added to the cheerfulness, one of the girls had finished her dinner before the rest, and was giving us some music on a new musical instrument. It is one that some kind friend sent us not long ago, as a sample of the wonderful progress they are making in automatic music. The instrument is called the "ariston," and the melody that was being played just then was "*The Home Over There.*"

A few hours later, as I was going my rounds at night, to see that the doors were all locked and lamps put out, and the valves to the steam-pipes turned properly, I passed near one of the large radiators in the counter-store. It was after 9 o'clock, and the great iron pipes were cold. I touched the live-steam valve, as they call it, and thought I would see how long it would take to warm it up again, and I just gave the valve a turn. In obedience to the simple act, a genial warmth began almost instantly to diffuse itself from the mass of iron under my hand. It seemed almost like magic, and then I remembered how these buildings had grown, little by little, year after year, ever since the time when I commenced praying for the boys and girls of Medina, and it seemed as though the answers to prayer had come strewn along through these years, almost as plainly as the heat came in answer to that simple act of turning that little valve.

It was dark, and I was alone; and so, kneeling there I thanked God again for his great mercies, and for the many pleasant neighbors that gathered around my place of work day by day. And yet, what have I done to deserve it all? My path in life has been but a series of stumbles and blunders, as it were. I have not even been obedient; that is, I have not all the time been obedient, for by fits and starts come rebellious feelings, even now when I have such great cause to be humble, teachable, and thankful. May God bless our neighbors! Ought not this simple little prayer to be often on our lips?

A LETTER FROM CALIFORNIA.

CAMPING OUT FOR A HOLIDAY.

THE king of our apiary came in yesterday, and the first thing he said was, "What a business of surprises bee-keeping is!" As there was a smile on his face, we concluded that there had been a pleasant surprise, so we asked what caused him to make that remark. He said, "You know when I examined the bees two weeks ago, I had to feed a few hives; now the strong hives have not less than five or six pounds apiece in the upper boxes." "Robbing," we remarked. "Not much," was the answer. "The bees are working as lively as crickets, and even the hungry swarms are as busy and contented as you please. I took out some frames, and there was honey enough for a week at least."

Well, he watched them to find where they got their supply, and found a few goldenrod blossoms, but the bees were roaring on the white-oak leaves. It was afternoon, so he did not see any honey-dew, as it is seen only during the morning, especially after a fog; but there the bees were, and that must be the source of their supply, as nearly every thing is as dry as chips. The honey is not very dark. Now, in the year when so much honey-dew honey was made, 1879, I think it was, they made it from the leaves of the live-oak, and it was very dark, and so strong we could not eat it till it had candied, and that is about the only honey here that will candy.

THE HOT SPRINGS.

Now, Mr. Root, if you will let me, I will tell the juveniles about a trip we took lately to the hot springs at Las Cruces, which means "the crosses," about two weeks ago. It was a treat to me, and a description of the springs my be interesting to you. As it is 25 miles from here, we had to get up early and load up our wagon with bedding, tent, camp-stools, provisions, and the babies, and then away we went over hills and hollows, across a river and creeks, and even a mountain, till we came to the village. Then we inquired the way of a Spanish lady, but she could not talk English, so she referred us to a man who directed us on our way — cross a creek three times, then turn to the left; so when we got turned, we found ourselves going up and up till we finally reached the springs. Such a pretty place! a kind of half-circle surrounded by mountains, way up to the sky, as our baby said. The camping place was nearly level, and dotted with magnificent sycamores and live-oaks; and after we had pitched our tent, fitted our beds, and made a camp-fire to get supper by, we took a look at the springs, as there are three springs in the circle, all three different, and within 50 feet of each other. The largest is the cold sulphur spring, then the hot sulphur spring. It falls into a large pool, and is as hot as a person cares to get into. Then the lowest spring, and the smallest, is pure *cold* water, clear and sparkling. Now, isn't that strange, and worth going to see, even if you did not bathe? But, what fun we all had, except the boys under eight years old. They "howled" when they were put in. The little girls of the same age all thought it was too good to get out of, and could be got out only by force; and then at night, after the work was all done, we would sit around the camp-fire and sing songs and hymns. We had Chinese lanterns and lamps hung from the limbs of the trees, and they and the camp-fire, with the people sitting around, made a pretty weird sight.

Los Alamos, Cal., Oct. 12, 1883. MRS. HILTON.

THE CHITTIM-TREE.

A NEW HONEY-PRODUCING TREE.

WHEN I wrote to you for June JUVENILE, I promised you another letter. I shall now try to fulfill that promise by giving a description of another honey-producing tree, which papa says yields honey as bountifully as the famous linden, and lasts about three weeks. This tree is called here "chittim." For aught I know it may be the same kind of timber the ark of the covenant was made of. The wood when green is soft as basswood, and white nearly to the heart; but when seasoned it becomes quite hard. The bark is rough like that on thrifty ash-trees, but darker in color; the bark on the limbs is smooth like the ash, but much darker. The tree attains a diameter of 18 in. to 2 ft., and perhaps larger, and grows about as tall as the other trees in the river bottoms. It grows on the uplands some, but I have not seen trees of it there. The leaves are of a deep green color, and are shaped like the leaves of the cherry, except that the broadest part is about three-fourths of the way to the point, or free end; they are about 1½ to 2 inches long; are about one inch broad. Make a section through the long way of a hard-boiled egg; look at the cut surface, and you have a fair representation of chittim leaves, the stem being at the little end, the edge of the leaf is perfectly smooth, non-serrated, and are thicker than cherry leaves; and when chewed, have a waxy feel between the teeth. The snowy-white flowers grow in clusters like apple-tree blossoms, and are rather smaller than mustard flowers.

I do not know any thing about stamens and pistils, nor calyx and corolla, etc., so I can't tell you any thing about them. The berries are now green, and about the size of, and taste something like, the berries on the spicewood bushes that grow in Indiana. They have one seed, or stone, to the berry.

Chittim blossoms about the last of June and first of July. Oh how the bees do go for them! How your kind old eyes would sparkle for joy, if you could be perched upon a limb in the deep shade, in the Trinity-River bottom on a hot July day, and hear the roar like a swarm, and see the bees fill up, and rush home and back in a perfect whirlwind of delight.

Papa got, on an average, 60 lbs. of chittim honey per colony. One Holy-Land swarm that came off the last of June filled up and gave 70 lbs. comb honey from chittim; two swarms gave 100 lbs. extracted honey each — one a hybrid, Italian and black, the other Italian and Holy-Land crossed. The nearest chittim is about a mile and a half from our apiary.

Horsemint failed to produce any honey here this year. Cotton yielded some, but the extremely dry weather nearly stopped its blooming, early in Aug. If ever a cotton-planter visits you, show him Prof. Cook's picture of the cotton-plant, and see if a broad grin doesn't spread over his face when you tell him that is a picture of the cotton plant, leaf, flower, and boll. I don't think he would recognize it as an old acquaintance. I think he would say the name is familiar, but it's the face of a stranger. We have the pepperwood-tree here. Bees are said to be very fond of it, but I have not seen it, so can not now describe. If I should ever see it in bloom, and think it deserves to be classed as a honey-producing tree, I will try to describe it for you.

Bees are working strongly for an hour or two of mornings on a weed called stinkweed, and also on an annual vine called love-puff.

EUGENE D. ARWINE.

Bedford, Tex., Sept. 14, 1883.

Thank you, Eugene. We have a good many descriptions of trees that bees work on, but no one seems to know, or can readily tell, whether they obtain any considerable amount of honey. This chittim-tree is worthy of notice, because you give positive proof that it furnishes honey, and furnishes honey largely. The yield which your father says he got would place it pretty nearly on an average with basswood. I should infer that the tree is quite a common one in your locality. If I am correct, you did not tell how many hives of bees your father keeps. This would be quite an important item in determining the value of the chittim-tree. I do not know that we have had any mention of it before. Have we, friends?—In regard to the picture of the cotton-plant, I presume Prof. Cook did the best he could at the time he looked the matter up; and if our Southern friends see he has not made a good picture, I feel pretty sure some of them will furnish him one; or if you could express him a whole plant, our artists and engravers could readily make a correct picture.

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FREDDIE'S DESCRIPTION OF THE LOUISVILLE EXPOSITION.

A JUVENILE ASSOCIATION SUGGESTED.

IT has been a long time since I have written to you, and I will now try to write a long one, and tell you about the Louisville Exposition and the Kentucky bee-keepers' meeting. We live 35 miles from Louisville, Ky., and took the early morning train, and got there at 8 A. M., Aug. 29. My ma and brother Edgar went with me. On entering the building, the sight was grand, and I can not give many of the particulars. The largest thing is the 600 horse-power Corliss engine moving so much machinery. The show is too big for a boy like me to describe. Nearly all the Southern States had fine exhibits there of timber, staves, cotton, and fruits. The finest show of pictures that ever was together is here. I took a ride around the park on the electric railroad. This is a new way to run cars. The track is ½ mile long. We stayed two days and one night. The electric light beats daylight. I can not tell you much about it all, as it is too big, and you will have to come and see for yourself.

I was going to tell you something about the bee-meeting and the honey show. The honey show was nice, and the bees fine. I met my pa at the bee and honey department. Pa and Dr. Allen, of Smith's Grove, Ky., have bees and honey together; they got the first premium of $25 on fine bees and queens, and the second premium of $20 on honey. There was 3000 or 4000 lbs. of the finest honey I ever saw on the table. There was a crowd around all the time, and such questions as were asked about the honey would make you laugh till you were tired; such as, "Do drones lay the eggs? do they sting? are all those queens? how many queens are there?" and all such questions.

The convention met in the directors' room; Mr.

Demaree, President, and Dr. Allen, Secretary. There were about 40 members there. They made me a member of their society, I had a good time with the members, and was at all the meetings but one, and got acquainted with the most of them. I had a talk with Mr. Hart, of Florida. He is a fine-looking man, and was on his way to the Canada bee-meeting. I saw Mr. Muth, of Cincinnati, and Mr. Pelham, of Maysville, Ky., and his foundation machine. I got acquainted with Mr. Drane, Mr. Stewart, Mr. Brown, and Mr. Deane. I had a good time with them. I was sorry to bid them good-by.

Now, Uncle Amos (I see some call you "uncle" and you must let me), I should like if all of us little bee-keeping sisters and brothers could have a meeting, and have some of our bees and honey to show, and have you with us. We might have a good sweet time (as long as the honey lasted), and a time long to be remembered.

My bees are doing very well, and I will tell you about them next month, as I am afraid my letter is too long already. FREDDIE CRAYCRAFT.

Salem, Ind., Sept, 3. 1883.

Why, Freddie, that is a tiptop description of a convention. It almost made me feel as if I were there to look on too. It is very interesting, too, because we know almost all the men you speak about. I wonder if they really knew that a child was "amang them, takin' notes."

ALL ABOUT BEE-HUNTING.

BEES SO TAME THEY CAN BE RUBBED ON THE BACK.

ONE of our neighbors lent me a JUVENILE. I like to read the children's letters. We have found about 100 swarms of bees in the last 3 years, but have got only 8 swarms now. My papa and eldest brother are in the southern part of the State. We got a swarm of bees the 12th of July out of the woods. The hive was full, and we divided it, and made two. I have to tend the bees for mamma. We don't use a smoker. We have one queen that is two years old. Our bees water near our door, and I can rub them on the back. There is a swarm of bees watering here now, and I can not find it. Our bees did not do very well this year, as it was not a good year for honey. The bees work on red-root, the Simpson honey-plant, ladies' tobacco, plum, cherry, Oregon grape-blooms, and willow-blooms; and it is just funny to see the way the bees work on the tiger lily. It is a deep red color, and has five petals, and looks like a honey-suckle, and it has a long leaf. They gather pollen off the bloom of the pine-tree, and they also get water to feed their larvæ. We don't know what kind of water it is.

I will tell you how we get bee-trees. We first chop the tree down, for we hardly ever find a swarm in a log; then we take a brace and a one-inch bit, and make holes along the tree, and then you can tell where the honey is. It saves chopping.

Well, I suppose you are getting tired of my long letter, so I must close. PERCY A. DUTTON.

Boulder City, Colo., Oct. 21, 1883.

Now, what do you think of that, little friends? Have you got bees so tame you can rub them on the back, and not disturb them? I guess our friend Percy did not rub very hard. When bees get accustomed to a particular place to get water, they will, if treated gently, soon learn to be very tame. I have told you in the A B C book how Blue Eyes used to put her fingers on them when they drank from the bottom of that inverted crock. Well, if you go about very carefully, and let them get accustomed to your presence, in a little time you can learn to put your finger on their backs, and even stroke them as you would pussy, without making them fly away. I have sometimes thought that they rather liked to be petted in that way. It is only while they are drinking that I have been able to do this with them, and I really can not tell why it is that they behave so quietly while sipping their drink.—Your suggestions in regard to finding where honey is located in the tree is a very good one, friend Percy, and I will put it in the next edition of the A B C book, if I think of it. Your letter is a very good one, and we did not have any trouble at all in reading it.

CLEOPATRA'S NEEDLE.

DOES IT DATE BACK BEFORE THE TIME OF MOSES?

I WONDER how many of these boys and girls have an "Aunt Sarah." Well, I have an Aunt Sarah and an Uncle Joseph, and I think a great deal of them, because I used to live with them, years ago, when I went to school at Wellsville, on the Ohio River. Well, of course I am always glad to have them know where I am, and what I am doing, and so I send them GLEANINGS right along, and here is a little letter which Aunt Sarah sent me to put in GLEANINGS:—

My dear Nephew:—I write to thank you for GLEANINGS; it comes flying in once a month, with its cheerful face, Saying, "Open and read me." Now, "Uncle Joe" is usually the first one to do that, as he has more time to devote to reading than I have; but I usually get through the most of it, and enjoy it very much. We have no bees, as you are aware, therefore that part does not interest me so much. I think no one can read Our Homes without reaping benefit from it. Reading your comments on Mrs. Harrison's letter, on what she saw in Central Park, in regard to Moses seeing Cleopatra's needle, set me to thinking. It was a new idea to me too; but I think she is in the right; for according to history it was first erected at Heliopolis, in Egypt, about B. C. 1600, and is, therefore, contemporary with Moses. Why it was called *Cleopatra's* needle, I do not know, for it was erected some 1550 years before her time. If any of your subscribers can give me any light on that subject, I wish they would. It was removed to Alexandria about B. C. 23; from thence to New York in 1880. It has been pelted by the storms of over 3300 winters, and still those wonderful hieroglyphics are not worn away, but can be read by those who understand them. Since the first talk of moving this wonderful curiosity to our country, I have read every thing I could about it, and it always filled me with wonder and reverence; but as wonderful a piece of architecture as it is, the mind and will power of man who formed it is more wonderful still. And how infinitely greater is He who made us and all things! AUNT SARAH.

Atwater, O., Sept. 24, 1883.

JUVENILE·DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye, takin' notes;
An' faith, he'll prent it."

I PRESUME, children, you all go to Sunday-school. If you do not, I wish you would commence right off next Sunday. If you have any confidence in my judgment or wisdom, please listen to me in this; and, by the way, it does not make any difference how old you are. Of course, if you are grown up it would hardly be proper to call you children; though in one sense we are children, all of us, or ought to be. Well, now, I hope you all go to Sunday-school, both old and young; and if you do not, I am sure that nothing in this world will contribute more to your happiness eventually, than a constant and regular attendance at the Sabbath-school nearest you. If there is not any near you, by all means start one. Even if you can not have more than two families, have a Sunday-school of those two families, and then get as many more as can be found. So much for Sunday-schools.

Now, in our lessons for some time past we have had a great deal about Samuel. Samuel was a good boy, you know; and, by the way, I believe all boys are good when they are small. Nothing tickles little Peter so much as to call him "dood boy," and he almost always deserves it too. All along through these lessons about Samuel you will notice how intimately acquainted he seemed to be with God. He talks to God in prayer, and God in those times used to answer back in words. God would say, "Thus say unto the people," and then when Samuel spoke to them he would say, "Thus saith the Lord."

Well, there is one thing that struck me as remarkable about Samuel. He seemed to be always in a line with God's work. God was working for the salvation of the children of Israel, and so was Samuel, just as you and I are working to save the bad boys and men all around near our homes. You see, Samuel's whole end and aim in life seemed to be for the saving of mankind, or his little flock. Just remember his constant and untiring exhortations to them to leave off wickedness, and do right. He says it over and over so many times that it gets to sound almost monotonous. But Samuel knew, doubtless, that it needed line upon line and precept upon precept, just exactly as we need the same nowadays. We do not anywhere find that Samuel had any other plan or purpose. He might have got rich, but he did not care a cent about riches. He might have got to be king, but he did not want to be king. He was not an office-seeker in any respect. He simply wanted the people to be good. We know that God loved him, because God honored him. In our lesson we are told that Samuel, after one of these earnest exhortations, said to the people, "Now therefore stand and see this great thing, which the Lord will do before your eyes." Of course, the people looked, and wondered what was coming; and then Samuel told them (to prove to them that he was right, and that God would really do as he said), he was going to call on God to make thunder and rain; and this was right in the dry time of the year, when they never had rain. Do you think that Samuel was in any way afraid it would not work? Not a bit of it. My little friends, he was just as sure the thunder would come promptly, as you are sure the sun will rise to-morrow morning; and when it did thunder awfully he was not a bit surprised nor frightened. God and Samuel were almost one. You see, he and his Father in heaven were in such relationship that the thought of one was that of the other; and Samuel had no thought in his mind that was not in a line with God's thoughts and God's wishes.

Now, I wonder if it has occurred to you while I have been talking, that Samuel stood almost where Jesus did many years afterward, like father and son. Is it not true, children, that the life of poor old Samuel was in many respects almost a type of Jesus our Savior? We have a beautiful little hymn in one of our Sunday-school books that brings out this thought so strikingly that I wish you could all hear it sung. I can give you the words to-day, but I can not very well give you the music; but I hope to be able to before very long. May be you can sing it to some tune you know. And when you read it, please to just remember this sentence in the middle verse: "I and my Father, purpose have one."

Oh to be like him, tender and kind!
Gentle in spirit, lowly in mind;
More like to Jesus day after day,
Filled with his spirit now and alway.

CHORUS.—Yes, to be like him we must abide
Near to our Savior, close by his side.

Oh to be like him! quick to obey,
Childlike and truthful, ready to say,
"I and my Father, purpose have one;
Thine, not my will, ever be done."

Oh to be like him!—tempted in vain,
Dwelling with sinners, yet without stain;
Giving our life-work sinners to save,
Triumphing over death and the grave.

These words, which we take the liberty of copying from Sweney and Kirkpatrick's "Wells of Salvation," can be sung to No. 16 of "Gospel Hymns."

Pa has 7 swarms of bees. He didn't get very much honey this year. My sister and mother were out feeding the bees one morning, and a bee stung mamma on the arm. KATE DOTTERRER.

Ross Run, Pa., Oct. 22, 1883.

WILLIAM'S LITTLE LETTER, "VERBATIM."

Mr root: My granpa has 10 hives of bees. We haves 4 hives of italians. I am 7 years old.
Rorning, Mo. WILLIAM E. NEFF.

Pa had four stands of bees before they swarmed; and after they swarmed he had 7. We didn't get very much honey this year. EMMA DOTTERRER.
Ross Run, Pa., Oct. 21, 1883.

FROM 47 TO 90, AND 6000 LBS. OF HONEY.

My father has 90 swarms of bees. He keeps them in the Simplicity hives. In the spring he had 47 swarms. He took off 2000 lbs. of comb honey, and about 4000 lbs. extracted. HATTIE A. HAY, age 9.
Sandwich, Ill.

I am a boy 7 years old, but am not much of a bee-man. It is about a quarter of a mile from here to grandpa's. What will a telephone cost, so that I can talk with Aunt Ola? DAVID I. SHENEMAN.
Pharisburg, O.

Our 75-cent telephone would answer your purpose very well, friend David.

BAD NEWS, AND GOOD NEWS.

My pa used to keep bees. Five or six years ago he lost over 100 that died with foul brood, and he has not had any since till last year.

FROM 1 TO 3, AND 180 LBS. OF HONEY.

He bought one in June, and increased to three, and got 180 lbs. of honey.
Rockwood, Mich. GEO. F. SPEDDING, age 13.

A HINT FOR MAPLE-SUGAR MAKERS.

We have been making maple molasses. Our camp is about a mile from our house. Our bees went out there, and some of them got drowned in the sugar water. Pa fed them bran and flour, and opened some trees near the house for them to work on, and they didn't go back any more. NOTA ALDERSON.
Gosport, Ind.

EDDIE'S REPORT.

I am a boy 12 years old. This is my first letter to you. My papa has got 17 colonies of black bees. He lost 3 colonies last winter. Uncle Johnson has 30 colonies of blacks. We got 30 lbs. of honey this summer. Papa says that may be he will give me a swarm next spring. EDDIE FRENCH.
Austin, Minn.

HOW SAMMIE GOT STUNG.

Last summer when pa was swarming some bees I stuck my head under the cap, and a bee stung me on the nose. Our hired man was so afraid of them that he would go clear around the house. He used to say the bees would sting him if he got anywhere near them. SAMMIE H. STRONGE.
Friendsville, Pa.

4000 LBS. OF HONEY.

My pa keeps bees, but I have to do the "heft" of the work, on account of his health. We have got 80 swarms; from them we have taken about 4000 lbs. of honey—a little over half comb honey, and it is not all off yet. There is one hive I call mine; from them I have taken about $8.00 worth of honey, and have sold it for 10 and 15 cts. GEO. W. ANDRESS.
Climax, Michigan, Sept. 10, 1882.

Please allow me to write you again. Pa has 60 colonies of bees, and ma has 4. Pa says he will give me a swarm in the spring. We got only about 1000 lbs. of box honey this season. We have had a photograph taken of our apiary. I have two pets — a bird and a cat. I like my bird the best. Its name is Beauty. It is a bright yellow.
LYDIA BRADFORD.
New Milford, Pa., Oct. 22, 1883.

Last fall a swarm of bees came out when I was at home alone. I ran up to the poorhouse, where pa was at work, and told him, and he went home and hived them, and gave them to me. They swarmed twice this summer, and I have sold one swarm for $8.00. FREDDIE A. PEASE, age 10.
Kingsville, O., Oct. 22, 1883.

LITTLE MOTHERLESS EFFIE, AND WHAT SHE CAN DO.

My pa has four colonies of bees. One swarm went to the woods. As all the little girls tell what they can do, I will tell what I can do. Churn, wash dishes, make beds, wash, iron, sweep. I have two sisters and one brother. My ma died four years ago. I am 12 years old. I would like Silver Keys.
EFFIE M. STEPHENSON.
Consville, Mo., Oct. 24, 1883.

My pa had 17 stands of bees the first of May, and has now increased to 31. There was a man who came here and wanted pa to come and see what was the matter with one of his stands. Pa went, and found that the comb was broken down, and the man told pa that if he would take the honey out that he might have the bees, so pa did so, and brought the bees home, and they are now doing very well. This was about a month ago. J. A. SHENEMAN, age 10.
Pharisburg, Union Co., O.

FROM 28 TO 80, AND 500 LBS. OF HONEY.

Pa had 28 colonies of bees in the spring; they have increased to 80. We had one swarm come out and leave without clustering. Pa found the tree that they went to, and we are going to cut it down and get them. We have taken about 500 lbs. of honey from them, and we will take more, I think. We have a small colony of bees, with glass on each side of the gum, so that we can see them do all of their work. JESSE VEACH, age 12.
Springport, Ind., Oct. 21, 1883.

My pa has one swarm of bees; he got them last fall from my uncle, John McGonnel. I am visiting at my uncle's. He takes GLEANINGS, and I read it at his house. I like to read letters the children write. I go to Sunday-school in the summer time. My pa is a wagon-maker. ADDA MATTSON, age 11.
Mill Village, Pa.

We know your uncle John, Adda, and we are very glad to hear from anybody who is his relation. We are glad to know you go to Sunday-school.

HOW ROBBIE GOT HIS SWARM OF BEES.

Last spring pa bought one stand of bees, and it swarmed twice; now we have 3, and when they swarmed the last time pa was down in town at work in the novelty shop. It is about a mile, and so I had to run after him to come and hive them, and so he gave it to brother Willie and me. I go to school. My little brother went, but he played on the road so long one day he froze his big toe, and will have to stay at home till it gets well.
Creston, Iowa. ROBBIE HEISLER, age 11.

My papa has 47 colonies of bees; some of them are black ones and some Italians. Pa winters them in a long narrow shed made on purpose, and packs them in chaff, and they usually do well. I go to Sunday-school during the summer months, and I like to go. My papa is the superintendent of our Sabbath-school. We have no library at the present time, but have *Everybody's Paper* and the *Children's Banner*, and I like very much to read them. My papa's name is John W. Wood.

Jackson, Mich. HATTIE M. WOOD.

A CAUTION ABOUT HAVING APIARIES NEAR TO BODIES OF WATER.

I live with uncle. He takes GLEANINGS; he has 43 swarms of bees. He said he would give me a swarm of bees next summer if I would take care of them, but I am afraid of them. This summer when the bees were getting honey fast, many of them, in trying to fly across our mill-pond, were so loaded down, or tired out, that they fell into the water, and I suppose were drowned. The bee-yard is about 5 rods from the pond. HERBERT STRAIT, age 11.

Otsdawa, N. Y., Oct. 26, 1883.

GEORGE AND HIS PET HEN, THE BUSHEL OF HICKORY-NUTS, AND 3000 LBS. OF HONEY.

I thought you would like to hear from a boy from Greenfield, Ohio. I go to school, and I read in the Fourth Reader. Papa takes GLEANINGS. He has 78 stands of bees all ready for winter. We got over 3000 pounds of honey. I have two brothers and one sister. I went nut-hunting the other day, and brought home a bushel of hickory-nuts. I have a pet hen. She is older than I am. She is ten years old. GEORGE H. POMMERT, age 9.

Greenfield, O., Oct. 26, 1883.

Pa calls you brother, and I address you as uncle. Pa takes GLEANINGS, and says it is worth a dollar each number; I like to read the JUVENILE, and thank you for being so kind as to send it to us. Pa keeps bees. He had black bees, 15 stands, but they all died two years ago. He sent last spring to Mr. Harrison, Lebanon, Mo., and got a stand of Italians. He paid ten dollars for them, and has got 8 stands now. He doubled one, and one got away from us. I go to school, and learn fast. I help ma wash the dishes. My brother-in-law has a stand of bees. I have a brother and sister at home. They go to school too. My sister has got blue eyes too.

Rock Spring, Mo. KATIE GOUGH, age 12.

LILLIE'S REPORT.

Papa had twelve colonies last fall; but by carelessness he has let them all die but four. They have plenty of honey, but it is in such a fix they can not get at it. We have to feed them; we made the feed after Mrs. Cotton's recipe. We think it is very good. We live a little way from town, but it is a nice place to keep bees. Papa took the honey out of the hives where the bees all died, and it is real nice. We had about 30 lbs. I have one brother and two sisters. One of my sisters is only three months old. She has blue eyes and brown hair. We call her Maud. She can laugh and crow, and she knows mamma as soon as she sees her. I go to Sunday-school every Sunday. It is not a very large school, but it is a good one. Papa takes GLEANINGS, and would not know how to do without it. You must not put papa in Blasted Hopes, for he is going to try to build up his colonies again. LILLIE THOMPSON.

Creston, Ia.

FROM 5 TO 16, AND 15 GALLONS OF EXTRACTED HONEY, AND 40 LBS. COMB HONEY.

My father and mother are dead, and I live with J. E. Davis. He takes GLEANINGS. I read the letters in the JUVENILE, and I thought I would write you one and get a book. We keep bees. We started with 5 in the spring; increased to 16, and got about 15 gallons of extracted honey, and 40 lbs. comb honey. I am fond of honey, and like to help with the bees. They have not made any more than enough to keep them since basswood.

WM. T. TAYLOR, age 14.

Mill Creek, Wis., Oct. 5, 1883.

CHARLEY AND HIS BROTHER, AND THEIR BEE-KEEPING.

Pa has 6 stands of bees. My brother and I own one stand in partnership, making 7 stands in all. Once we had our bees in real old-fashioned hives, which we made ourselves. A man who thought he understood bees very well came along, and pa let him put them in new-fashioned hives. He transferred them for pa, and they all died. Pa afterward sent to you for 5 lbs. of bees, which were shipped to us and our 7 stands are an increase from the five pounds. My brother and I attend to the bees. Pa don't generally go about them. I like bees, and like their honey too, but they don't like me. After I am about them for a time they seem to get used to me, and do not sting so badly. In fall we get goods boxes and put the stands in these, filling around with chaff. CHAS. HAINES, age 14.

Moons, Ohio.

FROM TWO OF OUR UTAH JUVENILES.

You have sent my father a great many things. He says that you are a very honest man to deal with. He keeps bees, and has 2 queens, daughters of one you sent him. They are very nice. They have brood in their combs. I am my father's only son.

Fairview, Utah. NEILS LARSEN.

BERTHA'S REPORT OF THEIR UPS AND DOWNS IN BEE-KEEPING.

Father bought a colony in 1881 and increased them to 3 colonies. He lost one in wintering, and the 2 he had left were so poor that he had to help them. He bought 3 more in the spring, and paid $40 for them. He increased them to 15; with the 2 old ones it made 17. We extracted 75 lbs. of honey from them, and sold 4 colonies — 3 for $10 each, and 1 for $5 in the fall. We wintered 13 good colonies in chaff. We looked at them to-day, and they all have brood in their hive. We got a queen from you last summer. She was nice looking, but would lay 2 or 3 eggs in a cell. We had to take her out. But we have raised 2 good queens from her. We got an extractor from you. It is the nicest one I have seen.

Fairview, Utah. BERTHA LARSEN.

THE YOUNG SHEPHERD, THE INDIANS, AND THE INDIAN WAR-DANCE.

I am a Virginia boy, away out in Arkansas. I have been here eleven months. I like it out here tolerably well. I have five brothers and two sisters. My two eldest brothers keep bees; they have 12 stands of Italians, and have an imported queen from you. My pa keeps sheep. We have 650, and herding sheep on this big prairie is my work from morning till night. One of my big brothers helps me. We herd on two good ponies, and I like it. I see lots of Indians here. I saw an Osage Indian war-dance last week. Two of them sat down and beat a drum, and the others all held up their tomahawks, and jumped and danced around them. We live only three miles from the Indian Nation.

CLAUDE E. LAWS, age 10.

Ft. Smith, Ark., Oct. 20, 1883.

LETTER FROM AN ENGLISH BOY, AND SOMETHING ABOUT ENGLISH BEES.

My father gave me one stock of bees last spring, and they swarmed, so I have 2 stocks now. I sent some honey to the show, and got 2 prizes for it. My father does not like the Ligurian bees; he has killed my queen, and given them a black one. He has proved that the English black bee gathers more honey than the Ligurian. It has not been a very good season here for honey; it was only for a week or two in July that they gathered any; then the strong stocks did work. I go to school at Henningham. It is a mile away from our house. I have a rabbit. I have my holidays now, so I thought I would write. **BERNARD PERCY WALTON**, age 8.

Honey Cott, Weston, Leamington, Oct. 24, 1883.

RAISING WILLOWS FOR BEES.

I saw in your journal that a man had pussy-willow cuttings to sell, and father says that I can have all I make selling them. They grow very plentifully here. By sticking them into a potato, and planting them in moist ground, they will take root and grow. They blossom out very unevenly. Some are in blossom now (February), and some have not started. The first things our bees work on in the spring are the swamp alder and the pussy willow. I will furnish six cuttings for fifteen cents. We live in latitude 44°. We keep part of our bees in the bee-house, and part are buried up under the snow. There came a thaw a short time ago, and one of the hives got uncovered, and father opened it, and the bees were all right. The first thing our bees get honey from is where men have cut down maple-trees, and where gray squirrels have tapped them and the sap has run out on the limb. Have you got any Bibles for Sabbath-schools?

Lisbon, Me. **RALPH E. GOULD**, age 10.

Yours is a very good letter, Ralph, and we are very sorry that it got in a heap of other letters, and was overlooked until just now. Thanks for the idea of sticking the sprouts into a potato. I should think it would be just the thing to give them a start.—And it is the gray squirrel, is it, that starts the sap from the maple-trees in spring?—Yes, Ralph, we have Bibles for Sunday-schools, and you will find them on the 25-cent counter.

TAKING THE "STARCH" OUT.

Since your **JUVENILE** came to hand that pa subscribed for, I have been much interested in reading the letters of the children. You say, that for a long time you had refused to wear a neck-tie. Pa said we should tell you that he has not put on a neck-tie nor a collar since the war. He says the war took all the "*starch*" out of him. Pa had 35 stands of bees at home last fall; but two have died, I think, of neglect. Pa and one of my uncles have commenced another apiary about 3 miles from here; they have 18 stands of bees there. Bees gathered but little surplus honey last season. The late-gathered honey they failed to seal, and they seem to die off very fast.

Moretz Mills, N. C. **J. W. DAVIS.**

Now, my young friend, in one way it does not make any difference whether your father wears a neck-tie or not; but perhaps your mother, or some of your grown-up sisters, and may be some other folks too, would be much gratified and pleased by seeing him put on a neck-tie and collar, and then perhaps it would be better if he should do so. You see, we are all bound to live for others; and it is certain that if we do, we can not be in danger of getting selfish.

150 LBS. OF HONEY FROM 150 SWARMS OF BEES.

My pa has 150 swarms of bees, and has had about 150 lbs. of honey. This season is one of the worst we ever knew. All the bee-keepers around us complain of having no honey. The spring was wet and cold, the summer dry. We had no rain for six weeks; and after it rained, the cold wind set in, and the bees could not fly. Early in September we had a big frost, which destroyed the corn and grapes, and almost all the plants, and what goldenrod is left, there seems to be no honey in it.

We see in **GLEANINGS** that some of the bee-keepers have had a good yield of honey, and I am glad to hear it. I saw in the **JUVENILE**, that you have a little boy-baby, and I hope he will grow and give you much joy; and if you have not named him, I will send you two names — Oscar and Arthur.

MELINDA NEUNAN.

Glenn, Mich., Oct. 10, 1883.

HOW ARCHIE TOOK THE PREMIUMS AT THE FAIR.

I thought perhaps you would like to hear how one of your A B C scholars was getting along in Canada, so I will now tell you what kind of luck I have had with bees. A friend of my father sent me a swarm as a present in July, 1880, and I managed to keep it through the winter all right in a Richardson hive that father bought for me, and the bees came out in the spring as lively and nice as any one would want. During 1881 I took from my bees about 95 lbs. of honey. I showed my honey at our county fair, and took first prize for strained and comb honey. I have now three good colonies of bees put away for winter, and my father and I have got five new hives made and ready for next season, and we intend making some more hives before spring. Now, Mr. Root, don't you think this is pretty good for a boy 13 years old? I don't know how I should have got along had it not been for your A B C book and **GLEANINGS**. My father paid for **GLEANINGS** last year; but as I get all the money the bees make, I now inclose $1.00, for which you can send it to me.

Ayr, Ont., Can. **ARCHIE G. WATSON.**

HOW LIZZIE'S PAPA PACKS HIS BEES FOR WINTER.

My papa has ten colonies of bees, which made about 350 lbs. of section honey. One colony made 100 lbs. of section honey; average per colony, 35 lbs. Papa sets out turnips in the spring for the bees. Our chief honey-flowers are Spanish-needle, goldenrod, and white clover. I like Spanish-needle honey the best. I help papa take care of the bees. I like to work among bees. I get stung sometimes, but not as often as papa. He laughs at me when I get stung; but when they sting him on the nose, I laugh at him. Perhaps it will interest some of the juvenile readers to know how papa packs his bees for winter. He stands his bees in a row by the side of the fence, and packs straw all around them, except in front. He hangs a carpet in front of them, and lays a wide board on that; and on a nice sunshiny day he lifts the carpet up and lets the bees have fresh air and a fly. The coldest day we had last winter, go and rap on the hive, and the bees would come down to the entrance to find out what was the matter. Our bees came out strong in the spring, packed this way. **LIZZIE BARNES.**

Pana, Ill., Oct. 22, 1883.

Our Homes.

For the Son of man is come to save that which was lost.—MATT. 18: 11.

I HAVE been thinking of late, dear friends, that we can choose no more profitable study in this world, than the studying of the wonderful character of our Savior. My text for to-day comes from the 18th of Matthew, as you will observe. In order to get a clear understanding of what our Lord meant when he uttered these words, "The Son of man is come to save that which was lost," let us go back to the 16th chapter of Matthew, verse 13, where Jesus spoke to his disciples, "Whom do men say that I, the Son of men, am?" He evidently asked this question to test the faith of his little band of followers—to see what sort of an idea they had of him, their master, who is really and truly the Son of man; a man born like the rest of us, and brought up from childhood. Several different replies came, and these replies were somewhat evasive, for they seemed more willing to tell what other people said. Finally he says, "Whom say *ye* that I am?" Now, you notice, friends, that when the rest were afraid to speak, or were a little backward, Peter, with his impulsive nature, was always ready. He was not afraid, even though great danger lay before him, and his impulsiveness led him many times to push ahead, even at the risk of making a mistake. Who is there who has not felt a special love for Peter? I feel sure, too, that Peter had a bright, clear, and abiding faith in his Savior; at least, he did at this time, for he answered out sharp and clear, "Thou art the Christ, the Son of the living God." What a beautiful answer! Who could have told it better? And yet it was off-hand, and given at once. No wonder the Savior was pleased. Peter unhesitatingly proclaimed what all the world were backward in acknowledging. He accepted Christ as the Son of the living God. I need not tell you of the encouraging words that our Savior used. He almost praised him, if our Lord ever praised any one, and he warmly commended him, at least. Peter shows plainly his humanity, by getting proud and important, almost immediately; for when Jesus began to tell them sorrowfully about his approaching death, Peter had the assurance to declare it should not be; and at this our Savior gave him a scathing rebuke, and told him that he did not savor of the things that were of God, but of man. How quickly had Peter gotten down from his great faith, and begun to be stirred by pride and ambition! Then Jesus said unto them, "If any man will come after me, let him deny himself, and take up his cross, and follow me."

Now, notwithstanding Peter's rebuke, the rest of the disciples seemed to remember the praise he had received, but had quickly forgotten the rebuke. We know that they also forgot what the Savior said about his coming death, for they kept constantly forgetting that; and after his crucifixion they kept constantly forgetting that he was going to be raised again, even though he told it so plainly and so many times. His followers were sons of men, without a doubt, and they were intensely human, just as we to-day are, my friends, intensely human. The most vivid thing in their minds was, that the Lord had said that Peter should be a "rock," and that Christ's church should be built on that rock; and therefore, as they reasoned, Peter was likely to be the greatest one among them; and very likely poor Peter held up his head, and agreed that he would probably stand nearest the Savior when he stood in his glory. They did not know what that glory was, it is true, but they evidently seemed to think it would be something grand and nice. Poor fellows! How little they dreamed that this glory and this cup their Master had told them of, was to be by his side when he suffered an ignominious death between thieves on the cross!

Well, they got to questioning the matter over, and got into a dispute. I presume they could, each one of them, remember something to encourage him in thinking that he ought to have the best place, and so they came to Jesus and propounded the question as to who is greatest in the kingdom of heaven. They did not quite say, "Which of *us* shall be greatest?" but I presume that question was uppermost in their minds. Mark says, they were disputing among themselves on the way; and after they got into the house he asked them what they were disputing about. Luke says, "There arose a reasoning among them, as to which should be greatest," and he says, also, that Jesus perceived the thoughts in their hearts. Do you know how he answered their questions? He first sat down. I can imagine him looking sorrowful and sad, much as a mother looks and feels when her children are disputing. He sits down and picks up a little child; and while holding him in his arms he says, "Whosoever shall humble himself as this little child, the same is greatest in the kingdom of heaven." Again he says, "Whosoever shall receive this little child in my name, receiveth me; and whosoever shall receive me, receiveth him that sent me." Then follows that wonderful talk on humility, that exhortation to us to be as little children; and he concluded by saying, "In heaven their angels do always behold the face of my Father which is in heaven." Now comes our text, revealing to them the great truth that he came not to make people great, or to do grand things in this world, but only to save that which is lost. He came and died for the poorest and humblest and wickedest man or woman that ever lived. He came not to exalt, in any sense; not to make men stare by his wonderful power, but to save sinners. How plainly and clearly this comes out as we study his life! At one time they came to a town where they were treated uncourteously. I presume they were snubbed and insulted. Two of the disciples, James and John, said, "Lord, wilt thou that we command fire to come down from heaven, and consume them, even as Elias did?" What a reproof he gave these disciples! "Ye know not what spirit ye are of;" as much as to say, "Do you suppose I came down from heaven to call down fire, and burn people up because they are wicked or in their wickedness? Why. surely not, ye poor deluded fellows. I came to seek and to save." How constantly people misunderstood his mission and purpose! Another poor friend got it into his head, that Jesus came to right wrongs by might and by power, and he came to the Savior to get him to make his brother divide the property rightly. Do you remember Jesus' answer? He said, "Man, who made me a divider over you?" You see, friends, that *making* somebody do right would not help to save souls in the least. It would have gotten him into an inextricable jargon of difficulties, while his idea was to *save* people. I can remember years ago, when we were all children, when we frequently came into the house, telling about how wicked somebody had been, or how somebody had wronged us, or abused us, that we often ended up by wishing that we had the power to punish them according to their just deserts. But mother always used to rebuke us by saying, "You mean that you wish they were better, do you not, children?" Very often we would reply, "Why, mother, it is not any use hoping that Mr. So and So will ever be any better. Just think how *awful* bad he is."

Mother did not always make any further answer, but she shook her head, with a pleasant look that showed plainer than words, "Love ye your enemies." Even poor father, with his old Connecticut views of things, used sometimes to talk pretty severely, and recommend the strong arm of the law for bringing delinquents to justice; and sometimes when mother still plead for the sinning one, we would laugh at her. Some of the older children would say, "Why, mother, you seem to think that tramps and dead beats and horse-thieves and highway robbers, and all that class of people, can be changed by reading the Bible to them." We laughed at mother, and we objected to her way of doing; but yet in our inmost heart we knew her way was the right one. "Not by might nor by power, but by my Spirit," was the prevailing thought of her life, and *is* the prevailing thought; for, dear friends, I can thank God that that kind old mother still lives; and when a good Christian brother comes to see me, after having shown him the sights of the factory, and introduced him to those whom he would like to see, I often take him down to see mother, and have a talk with her, and she always has a real good visit with any brother who loves the Lord.

Now, friends, suppose you turn to your Testament, and find our text; and when you find it, read about the ninety and nine, and about the shepherd being determined not to lose even one sheep, even when he had plenty more left behind. So it was with Jesus in his efforts to save sinners. Even if he had a whole flock of faithful followers, he would go away out into the mountain, seeking for one who had gone astray. And then he tells of the rejoicing about that one that was saved. You see, it is not his will that even one be lost. "Even so it is not the will of your Father which is in heaven, that one of these litte ones should perish." Again, right after this comes the wonderful advice in regard to troubles with neighbors. "If thy brother shall trespass against thee, go and tell him his fault between you and him alone." If you have trouble with anybody, instead of talking it all over the neighborhood go and see the one who has done wrong, and see him alone, and talk it over in a brotherly spirit.

Not a great while ago some one told me that an old neighbor, and a very dear friend, felt quite hard toward me, and he mentioned what he said. "Why did you not tell me this at once, Mr. F.?"

"Why, I did think of doing so, and then I thought it was not best. But finally I decided that probably you would want to know it, and so I told you."

"I am very glad indeed you have done so, and I am sorry I did not know it at the time of it. I will go at once and see him."

I left my work, and started off in the middle of the day. After a while I found him, and asked an explanation. He gave it fully and frankly. Very likely I had been rather careless and forgetful, and may be, besides, indifferent to the rights of my old friend. But some way I had, in a sort of careless manner, overlooked it. Then came the question again, "Why, Mr.——, this happened a great while ago. Why did you not come to me long ago, and tell me how it looked to you?"

"Well, to tell the truth, Mr. Root, I suppose that would have been the better way of doing; but, like almost everybody else, it is a great deal easier for me to complain to others than it is to go right to the one who has wronged me."

Now, friends, that is just human nature. I presume that you and I are just about the same in this matter. We can go to a man and give him a blowing-up, sometimes, without very much difficulty. But if you think it is an easy thing to go in a kind, pleasant, Christian-like way, and tell your grievance to the one who has done badly, just you try it. One of the boys in jail told me one day that it went so terribly against the grain. I know, too, that it does, friends, for the "grain" is mostly the old Adam in us; and a Christ-like spirit is the God part that is not in us until we are changed over. It is, in fact, such a big task to take a hard man and soften him down into this humble spirit, that Christ once expressed it by saying, "Ye must be born again."

Well, where both parties are Christians it is generally a pretty easy matter to fix up all misunderstandings, by going alone to see your friend. Now, did Jesus give us this plan of settling difficulties that we might get along smoothly in the world? Was his greatest object in directing us so to do that we might get along peaceably, and feel happy when we lie down at night after the labors of the day? I used to think it was; but since I have been studying this chapter, I think I can see a higher motive yet. The reasons I have just given are mostly selfish ones. The true reason seems to be right in the close of the 15th verse—"If he shall hear thee, thou has gained thy brother;" you have saved that which was lost, and proved yourself worthy to be called a follower of Christ. Sometimes I am tempted to think the world has but little such religion, or very little of it gets to be practically applied. How many Christians are there who are so eager for the saving of every sinful soul they meet, that they will always put the precepts of this little verse in practice? Do even our ministers, God's chosen servants, always go to the one who offends, and see him alone, rather than have a talk about it to some other brother? I know I fall far short here, my friends — very, very short. I think over and over again of the words of my old friend, how he said that it is easier to talk to somebody else than to go right to the man's face with what we have to complain of.

"Thou hast gained thy brother." What a blessed thing it is, dear friends, to have *gained* a brother! It seems to me now when I meet with this friend whom I have mentioned, just as if he had been somewhere, and got home. It is "kind o' funny," but I have been wondering if *I* am not the chap who has got home, instead of himself.

Well, Jesus does not advise you to stop here, friends; for sometimes this friend is stubborn, and will not listen, even to mild words. In that case are we to give it up as a bad job? Not at all. If you are following Christ, you have come to save that which was lost, and you do not give up the brother for quite a spell yet. You get one or two intimate friends,—two are better than one, many times,—and then go and talk it over. You each plead your side of the story, and these good friends, who are trying to pattern after Christ too, are there with the avowed purpose of saving you both, if they can. They are friends to both of you; and their eyes not being blinded, or made green by jealousy, are able to see the matter exactly as it stands. If you do not look out you will feel small before you get through. As you meet their gaze and friendly looks, you both begin to feel ashamed of yourselves; and if you are the kind of men I take you to be, you end it up by a little prayer-meeting, and are better friends after that, as long as you live. What a wonderful thing is arbitration! and I guess it was discovered about the time somebody commenced reading this very passage in the Bible. These kind friends can, if you choose, take down what you say, both of you, and afterward sum it up in good shape, just as a lawyer would, only lawyers would charge you a great lot of money, while Christian friends do it all for love to you, and love to Christ.

Now, Jesus is so anxious to have us keep trying, and never give up, that he recommends still further measures before we let the poor deluded stubborn brother go, and give him up. He says, "Take it to the church;" and not until the united influence and pleading of the brothers and sisters—in fact, the whole body of the church—fail should we say, "The man is lost, and beyond rescue." One Christian is a power, my friends, but two Christians are a more mighty power, and a church of Christians ought to be able to pull *every* bad man out of his evil ways, if they bend their energies to it.

It would be the most natural thing in the world to suppose that Peter would have a word to put in just about here. (Would it not be funny, if I should get a hobby about the character of Peter just about now?) Well, Peter did have something to say. He puts in a conundrum right here. "How oft shall my brother offend against me, and I forgive him?" He modestly suggests, that about seven times might be about the right thing. But his Master rebuked him again there. No, Peter, do not give the man up after you have tried him seven times. Do not get weary in well-doing, and say it is not any use. Do not stop at seven, Peter, but try on until seventy times seven—490 times. And our Savior did not say he should give up then. "For the Son of man is come to save that which was lost."

While they were all listening so intently, our Savior told them a little story, as he often did, to illustrate how we should keep trying to save people. In that little story he reminded us how God had striven with us all, and had borne with us during our many and many shortcomings. And he reminded them how wicked and ungrateful it would be to get impatient with those whom God has mercifully placed near us. Be merciful, he said in substance, even as ye hope to obtain mercy; and in that wonderful prayer which he gave us, he says the same thing in substance—"Forgive us our debts as we forgive our debtors." Why should we do this? because it was his command? Yes, and also because we should be trying to save that which was lost, even as our Savior came into the world to save sinners.

Many of the prophets pronounced judgment upon sinners. Samuel pronounced judgment upon Saul; and even Peter pronounced judgment upon Ananias and Sapphira, and by a miracle they were struck down dead. In reviewing the matter of Christ's life and ministry, it seems a little singular that he never called down judgment upon any one. He left that, as it were, to the Father. His whole end and aim and purpose seemed to be so emphatically absorbed in the business of saving, that he never harmed any one — not even those who were so grievously wicked and cruel. When John the Baptist was beheaded, and they went and told him about it, it seemed almost beyond comprehension that he should not bring down punishment upon the perpetrators of the wicked deed. He did nothing. It seemed to be out of his province. He came to save, and not to destroy. He came to plead with humanity. He even refrained from using the power he possessed, when he was led to the cross. Legions of angels were ready to come at his command, and yet he never called them. He died trying to save lost men and women. He gave his life for the lost. He gave it meekly and uncomplainingly; and when opportunity came for saving a soul, even during that last moment of agony he rejoiced at the opportunity of welcoming and inviting a hardened sinner to meet him in paradise. Dear friends, Jesus came to save *you*. He is striving to save you now. He is following you lovingly and patiently. That wondrous spirit of Christ our Savior is at work just now in trying to save, and all you have to do is to meet him — simply to meet him — not half way, for you have only to turn, if you are not his already. Thus far your back has been from him. He has been pleading in vain; he is pleading now. Will you not turn to him now? will you not meet him while he comes to you with outstretched arms? Will you not believe that he wants you among his followers? that he wants you to turn right where you are this day, this hour, and this minute?

For the Son of man is come to save that which was lost. — MATT. 18:11.

Tobacco Column.

I AM much interested in the Tobacco Column in the JUVENILE, and have much sympathy for those persons who, after having become habituated to the use of the filthy weed, are making an earnest struggle for freedom. I had chewed tobacco ravenously, and smoked an old pipe, for fifteen years, until every fiber of my body had become saturated with nicotine; but as yet I had no conscientious scruples on the subject of the use of tobacco.

In the latter part of the summer of 1869 I sometimes read in the Bible, and began to conclude I was a sinner; and as hell did not seem to be a desirable country to take my family to, I cast about for a safe way out of the dilemma, and began to pray for pardon. Sometimes I addressed my petitions to God the Father, and sometimes to Jesus Christ, as I did not know which one held the pardoning power. And it so happened, that on a day when it rained continuously and hard (as I could not well do work on the farm), I got down on my knees in my house, while the family was occupied with household duties as usual. And as I was praying with vehement desire, and was not sure there was a God, a man who was a stranger in the country, and had lost his way on the prairie in the rain, entered the house to make inquiries as to his whereabouts; and seeing my distress he kneeled beside me for one moment, placed his hand on my head, and said some words, whether to God the Father, or to Christ the Son, I do not know, as I did not see the man, neither did I hear what he said, except his last words were, "It is all right." And instantly I was deluged in heavenly light, and filled with the Holy Ghost. All my guilt and fears were gone; the man was gone; and from that day to the present I have had no use for tobacco or pipes. Oh but it was easy to quit the use of the vile stuff, when God as Father, and God as Son, and God as Holy Ghost, lent a helping hand! Would it not be a happy day for the world, if all the capital and labor now invested in tobacco were turned around, so as to produce "fine flour and honey and oil" (Eze. 16:19)?

I received the $3.00 queen, and was successful in introducing her into a colony of high-strung bees.

Pana, Ills., Sept. 19, 1883. H. A. SIMPSON.

I know, friends, the above account sounds a little singular; and, if I am not mistaken, there are some among our readers who will be tempted to make light of it. For all that, our good friend S. brings out a great and important truth. When we once turn fully and earnestly to the business of seeking God and his righteousness, it *is* easy, oh how easy! to break off from any sinful habit. I wish I had the eloquence and power to impress this great fact, that the reason why we suffer and are tormented by the temptations of old evil habits is because we are not submissive; we have not fully yielded, and we are still in the bondage of selfishness. It seems very strange indeed to think our good friend was so intent in considering this matter of his sinful life, and God's mercy, that he did not even look up to speak to the stranger who came in; but I am sure he tells us the facts truthfully. I have given his simple letter a place here, because it may lead some other poor soul to go down on his knees in just that earnest, honest, child-like simplicity; and when he does this, I am sure his burden, like Christian's burden in the Pilgrim's Progress, will tumble off of itself, and he can rise up a free man—free from tobacco, and free from other similar weaknesses; free, so long as he is obedient and faithful.

I received the smoker you sent me in July, all right. I haven't smoked any for the last 5 months, nor do I ever expect to again. We are using the "Golden" hive, but have not had any honey since July 3. HANNAH HARRISON.

Fisher's Point, Jackson Co., W. Va., Oct. 15, 1883.

The smoker is at hand. I received it with great pleasure, and think I am duly repaid for quitting so vile and filthy a habit. May God bless you in all your undertakings. G. H. GROSS.

Tower Hill, Ill., Nov. 8, 1883.

ON AN EXCURSION.

A VISIT (?) TO THE HOME OF THE HONEY-BEES.

FRIEND ROOT:—After having read GLEANINGS four or five years, and the A B C, and having become pretty well acquainted with you, at least by reputation, I had a great desire to visit you and your factory, see how you carried on business, and last, but not least, to take by the hand a man who has the courage to carry his religion into his every-day business; who makes an effort to reform his fellow-man by actual effort instead of mere talk. So, last August, when the C. L. & W. R. R. announced an excursion to Cleveland, I thought that was my chance, as excursion rates suit my pocket-book exceedingly well; but when I got aboard the train, and found I should have to stand up, as I did until I got half way to Medina, I began to think that the fare suited me much better than the accommodations. In common parlance, "you bet" I was tired, and I kept a sharp lookout for Medina, which I expected to recognize by your factory building, which, I understood, was near the railroad. So when we came to the little lake, I believe they call it "Chippewa," I knew that we should soon come to Medina. As the train had been stopping at all the large towns, I supposed it would stop also at Medina; but in that I was mistaken; for our long train of sixteen coaches thundered past your place at such a rate that I could scarcely see the stone bee-hive, or read "A. I. Root," "In God We Trust," etc., above your office window. I was somewhat disappointed, but concluded to go on with the rest of the tired, dusty, thirsty people to Cleveland. Instead of taking a trip out on the lake, which was included in the excursion, I went up into the city to wash, and get some supplies, and it was 5 o'clock in the evening when we arrived at Union Depot. Thinking to return to Medina on the 6:30 train, I was told that train would not stop at Medina either; so, meeting some friends at the depot, I concluded to stay all night in the city. I saw electric lights for the first time in life. We took a street-car and rode out on Euclid Avenue, and thus got a glimpse of a part of the city by electric light. After returning, we went to the hotel, and went to bed. I do not remember, but I suppose I dreamed of Novice, Medina, our long train containing 1100 or 1200 people, all tired and thirsty, except those who carried bottles, or were full of beer, got at the last saloon we passed. I wondered, sometimes, if there was not some understanding between the train men and the saloon-keepers, to enable passengers to stop and get a drink, and get their bottles filled. I have thought at times since, that the adoption of the "second amendment" would stop a good many saloons between Bridgeport and Medina. But, I am getting off my story.

Next morning I took the 7:10 train, intending to stop at Medina, sure, and I was thinking what a nice visit I should have at your place, intending to stay until the next morning, and take a good look around town. But, I was to be disappointed again, for the conductor refused to give me a "lay-over" check; then you may be sure I was badly disappointed. But we had not reached Medina yet, and I concluded to content myself as best I could by taking as good a look as I could get from the car platform while the train stopped two or three minutes in front of your factory. The view was partly obstructed by some freight cars standing on the side track. At the left end of the building, near the engine-house, were some of your boys standing looking out of the door at us. One, I thought, was holding the barrel of a smoker to his mouth, and imitating the sound a calf makes when taken away from its mother. One of the passengers, whom I don't think would vote yes on the second amendment, looking across at the brick shed in front of the factory said, "Is that a saloon?" and started for it, when some one told him he was mistaken, when he came back to the train. But the first saloon he saw he went straight for it, but had hardly time to swallow his dram when the train started; but he managed to get aboard with some difficulty.

Thus, though I was much disappointed in not getting to visit you, I was otherwise well pleased with my trip; but I think the next time I start for Medina I will take a regular train, and make better time, and stop where I wish to. R. M. DENHAM.

St. Clairsville, Ohio.

Friend D., I am very sorry to know that your excursion turned out the way it did; but perhaps we can, however, gain one or two morals from your little story. One is, that when you travel a good many miles for a little money, on an excursion ticket, you will probably have to conform to excursionists' regulations. Another thing: I wish our boys would all take notice, that it looks bad to stop work and look at folks passing by on the cars. I should be very sorry indeed to have you think that our large buildings were built for a meat-shop, and that we are in the habit of keeping calves around here. I think if we should inquire into it, we should find that the young man does not get very big pay, and I fear he is not likely to very soon, either.

Reports Encouraging.

FROM 8 TO 20, AND 500 LBS. OF COMB HONEY.

I COMMENCED the season with 8 colonies of bees, most of them in box hives; transferred them just before fruit-bloom to L. frame Simplicity hives, and increased to 20 by dividing and by natural swarming, and secured 500 lbs. of comb honey in one and two pound sections, which I found sale for at from 15 to 18 cents, and calls for more. My best colony gave 122 lbs. of comb honey in 2-lb. sections. I had all blacks in the spring, but bought an Italian queen, and have half of my colonies Italianized at present. The season was not good in this part of Southern Illinois. During fruit-bloom, and the early clover season, the continued rains washed the nectar from the flowers. July was rather dry; August fairly good; but September was too dry for bees to do well. Smartweed, Spanish-needle, and goldenrod were abundant, with Simpson honey-plant, basswood, and other wild flowers in less quantities. By the use of the A B C book, Cook's Manual, Alley's Handy Book, Newman's Bees and Honey, and the assistance of GLEANINGS and the *A. B. Journal*, and in consideration of the poor season, and the fact that I am an A B C scholor, trust I have bridged over the honeyless chasm of Blasted Hopes for this time. J. A. BLACK.

Pleasant Mound, Ill., Nov. 1, 1883.

FROM 7 TO 15, AND $78.40 IN MONEY.

My bees have done very well this season. I started with 7 swarms. I now have 15, and have sold comb honey to amount to $78.40, clear of all expense.

Hudson, Ohio, Oct. 29, 1883. E. B. BLACKMAN.

My report is as follows: Fall of 1882, 71; lost 6 in wintering and 4 in springing. Sold 1; on hand, June 1, 1883, 60 colonies. Fall of 1883, 115 colonies. Comb honey, 2300 lbs.; extracted, 4200 lbs. S. H. MOSS.

Colchester, Ill., Nov. 5, 1883.

My report for past year is as follows: Fall of 1882 I had 24 colonies. I lost one in wintering, and sold one, beginning the spring with 22. Increased to 39 colonies, and took 800 lbs. comb honey in 2-lb. sections, and 350 lbs. of extracted. I fed a barrel of sugar for winter rations. This is only half a crop, but the season in this locality was not good. None of my bee-keeping friends in the neighborhood got any surplus honey at all. A. CAMERON.

Derry Station, Westmoreland Co., Pa., Nov. 7, 1883.

I am a beginner in bee-keeping, having caught two swarms in July, and bought 6 in August — 4 old and 2 new swarms. There is only one frame hive in this part of the country besides mine. I transferred into Simplicity hives, home-made, taking out 60 lbs. honey, and they now have an average of about 10 lbs. apiece, and are bringing in more. The old-fogy bee-keepers prophesy a total loss for me this winter, and I don't dispute them. If I have any left in the spring, I shall want quite a bill of goods.

Metropolis, Ill., Oct. 1, 1883. C. A. DICKERSON.

REPORT ENCOURAGING FROM TEXAS.

Texas is truly a wonderful country — a whole year nearly gone, in which it has been nip and tuck for our little pets to survive the terrible drought that has lasted nearly five months. Here it is Nov., and my bees for the past four days have been busy gathering a timely flow of nectar from the despised chamomile. Thank God for this bitter weed; it will help my bees through the coldest part of winter, without feed. The queens have been laying nicely ever since the first of Oct., and by doubling up my 25 three-frame nuclei with my 100 colonies, I now have an even 100 very fair colonies of bees, 80 of which are Cyprians. My average per colony for the past four years has been 96 lbs., with the small sum of 11 lbs. per colony this year. Many black colonies of the neighboring bee-keepers have gone up, and many enthusiastic beginners have been discouraged, and propose to quit the business. No frost yet. Thermometer to-day, 86° in the shade.

Dresden, Tex., Nov. 6, 1883. B. F. Carroll.

THE BEE-KEEPERS' EXCHANGE.

AND WHO IS RESPONSIBLE FOR ITS DEBITS AND CREDITS?

Friend Root:—I am both surprised and wounded at reading the published letter of J. F. Fletcher, under the heading of "Are They Swindles?" in November Gleanings; surprised that you would publish it without first consulting those whom you knew must know the facts, and could explain; wounded because my name is used as having answered a card that I never saw. It does seem to me that the Christian grace of charity, as developed in you, might have constrained you to wait till I had been consulted privately, before adding my name to that letter. I think I can truthfully say of myself, I would not have done it were I in your place. There are some texts in the 13th chap. of I. Cor. which I would recommend to you.

I could give the history of the *Exchange* from the beginning, but it would make too long a story; suffice it for me to say, I have had nothing to do with the publication of it since the January No. of 1883 was issued. I was engaged to edit it, and did so till it passed into the hands of Messrs. King & Aspinwall, I residing in Brooklyn, N. Y., since the first of Feb. last, and the *Exchange* published in Canajoharie, over 200 miles away. Now a word for Mr. Houck, who is gone, and can not speak for himself: Finding that his disease was getting the best of him, and that he could not attend to his business, and with the hope of regaining his health, he went to Colorado. Before going, however, he arranged with Mr. Nellis, of Canajoharie, to publish the *Exchange*. Soon after he went, Messrs. Colgrove & Ulery made overtures to purchase the *Exchange*, and continue it, agreeing to carry out all contracts for advertising, etc. The transfer was made; I continued to be the editor in every thing pertaining to bees. The Colgrove & Ulery administration was short, they had a disagreement, dissolved, sold the *Exchange* to Mr. King, and left for parts unknown. Now, if any swindling has been done, these latter gents are the ones that did it. Mr. King deserves the thanks of the subscribers, rather than insinuations, such as Mr. Fletcher throws at him. Mr. Houck is dead. His executor, at Canajoharie, N. Y., will pay all just claims against the estate. I am at 27 Park Row, N. Y. City, where I can be found for further information, if wanted. Theo. O. Peet.

Brooklyn, N. Y., Nov., 1883.

Friend Peet, I do not see that you ought to be either surprised or wounded. Whenever any business with which I have any thing to do is left in an unsettled state, and nobody can tell who is responsible for it, I want to be called upon at once to tell what I know of it. If this is not the way in which I presented it, I beg pardon. Our account against Theodore Houck was sent to his administrator, and that matter is at an end, so far as I know. If the administrator thought the property insufficient to pay the debts, all right. The men we are after are Messrs. Colgrove & Ulery. I have been told, in answer to several inquiries, that nobody could find them. Letters from them have been submitted to me, offering certain things at such unusually low rates, I could not but think that the matter needed ventilation. The explanation you have given is quite satisfactory, and we are well satisfied with what friends King & Aspinwall have told us. And now we should be very glad to hear from Messrs. Colgrove & Ulery, and it seems to me very much better to have the whole facts of the matter brought out in this way, rather than to have it rest where it did before I said any thing. It seems to me right to ask for explanations; and I assure you I shall never feel hurt when you call upon me for explanations in regard to any business I do, or have any connection with.

THE BEE-KEEPER'S SUNDAY.

The discussion of Sunday observance in Gleanings is of much interest to me, and I wish to give my opinion of hiving swarms on the Sabbath, and staying from church to watch the bees. Friend Ralston, on page 531, September number, I think, is just about right in this matter, but I wish to add another link to the chain of Sunday observance. It seems, that when our Savior was here on earth he was very careful to perform only such things on the Sabbath as would relieve suffering, or do good; and as his life is laid down as our pattern and guide, we should do no more than he did. It looks to me, that, to stay at home on the Sabbath-day on purpose to watch the bees and hive swarms, is partial, if not whole proof of a greater desire to lay up treasure on earth than to prepare one's self for the great change that awaits us all. A swarm of bees is worth from $2.00 to $10.00, according to size and kind; and to stay at home on purpose to keep them from absconding seems akin to lusting after riches; and from my own experience I do not know but it is lusting after riches in reality. It looks like a very trivial matter to watch bees on Sunday, and it forms a very good excuse to stay at home; but if a swarm issues, can it be said that they are in distress, and suffering for help? Are they in like circumstances with the ox or ass that may have fallen into the pit?

As far back as I have the history of bees, it has been their nature to swarm when they get ready, without regard to days or time; and, as a rule, cluster for a longer or shorter time, then hie off to some hollow tree or other cavity, there to build up a colony to do the same thing over again. God has given us six days out of every seven to perform our duties; and in his infinite reasonableness asks us for only one day out of the seven, and I think it is our just duty to give him that day, and all it may bring forth, except casualties and accidents that may happen on that day that bring on pain, suffering, and distress that may be abated by us. It is our bounden duty to relieve all suffering and distress on all days, if it is in our power to do so. It is our duty, whether we have the power or not, to do what we can.

Another thing: I read of bee-keepers who say they crush bees to death, even those pets they love so well, when it pays better to kill them than to save them. O ye of little faith! A bee is very small to us, and one or two individuals look very insignificant, and of small moment; but consider that we are also of very small dimensions in the eyes of our keeper, or God. Have mercy on every thing beneath us, and then we may with reason expect mercy from those above us.

T. J. COOK.

Newpoint, Ind., Sept. 9, 1883.

Dear friends, when I read the above letter it struck me at once as being remarkably clear and to the point, and I fell to wondering that the writer, with whom we have recently become acquainted (on account of his little brush for brushing off bees) had such a bright clear faith, and I had never before caught a glimpse of it; for in almost every letter I get I am in the habit of catching almost every word that indicates a love for the Master. I felt like saying, as I reached the end of the letter, "May God be praised for such earnest, honest reasoners as yourself." And now comes the news that friend Cook is no more. He was near to his end, in fact, when this letter was written, as you will see from the letter below:

Friend Root:— As I have not the knowledge of the business transactions between you and my son, I hardly know how to write. He died on last Monday. He died suddenly of heart disease. I can't fill your order, as he has none made. You have the privilege to make them, if you wish. You may send me the balance due him, as I am his heir by law.

Your friend, JAMES L. COOK.

Newpoint, Ind., Nov. 9, 1883.

Wouldn't it be well for us, dear readers, if our last message to our friends through GLEANINGS be one of faithful exhortation like the above, to follow after God and the things pertaining to eternal life? Our readers will remember that friend Cook's wife died on the 21st of last September; and in writing her obituary notice, he used these almost prophetic words: "But a few days or years more separate us."

Nearer the bound of life, where burdens are laid down;
Nearer to leave the cross to-day, and nearer to the crown.

Juvenile Gleanings.

NOV. 15, 1883.

For God sent not his Son into the world to condemn the world; but that the world through him might be saved.—JOHN 3: 17.

IN our last issue the date of the convention which meets in Flint, Mich., was Dec. 6 and 7. It should be Dec. 5 and 6. Out of four notices sent us of this convention, we believe the one we used was the only wrong one, and hence the blame does not lie with the printer.

SUPERSTITION IN REGARD TO BEES.

IN our article on bee culture in Maine, on page 706, friend Crafts mentions the fact that the old superstition in regard to the importance of informing the bees when a member of the family dies is still in vogue in some localities. It hardly seems possible, that in this day of books and papers and intelligence, any one should still hang on to such relics of by-gone days. I am afraid our veteran box-hiver does not take the bee-journals.

ON page 667 of our last issue, a sentence was allowed to go in, which might reflect on the *Bee and Poultry Magazine*. I did not understand it so at the time, or I certainly should not have let it pass. The *Magazine* folks purchased the subscription-list of the *Bee-Keepers' Exchange*, but have nothing to do with their debits or credits; and when friend Fletcher spoke of "smoothing things up," I took it that he meant the proprietors of the *Exchange* had got the *Magazine* folks to fill the unexpired time, to smooth things a little, but had left their creditors to get along as best they could. I sincerely regret having let any thing pass that had even the appearance of reflecting on the *Magazine*, and humbly beg pardon.

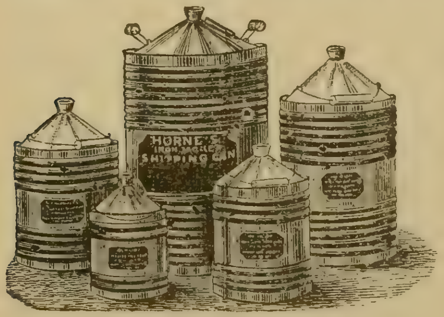
D. A. JONES'S HONEY-LABELS FOR SECTION BOXES.

THESE are at length at hand, and we are prepared to send samples free. Friend Jones numbers them A, B, C, D, E, F, G, H, I, and J. A and B are 4¼ inches square, and are intended to go on opposite sides of a pasteboard box, made to hold a single Simplicity section. This pasteboard box has a bit of red tape attached to the top to carry it by, and makes a safe package for a single section of honey for the consumer to carry home, or to pack into a trunk, if he wants to send it away. It can be opened and closed in an instant, and the price of the box is only 2 cts. each, 15 cts. for 10, or $12.00 per 1000. It can be sent safely by mail for 2 cts. These labels, A and B, are worth $3 50 per 1000. If you want one on each side, it costs $7.00 per 1000, making the net cost of these boxes, already labeled, about 2 cts. each, when they are bought in quantities. Our experience is, that the honey will bring about 5 cents more per lb. The box is so pretty that 5 cts. would not be an extravagant price for it, for a fancy box for knick-knacks. At present we have these boxes for the Simplicity section only, of the size given above. Labels C and D are 5¼ inches square, and of course are intended for a larger section, and will answer for a section considerably larger than 5¼x 5¼. The price of C and D is $4.00 per 1000. E and F are made to go on three sides of the above-described pasteboard box. They are worth $4.50 per 1000. G and H are for a similar section glassed, and are made wider, so as to have a portion turn over the edge of the glass, or, at least, that is my understanding of the matter. I is a beautiful label for a 2-lb Jones can. It has on it a picture of a hexagonal apiary. J is similar to G and H, but a little larger. These labels, although intended for a particular purpose, can be used on cans or sections, or boxes to hold sections, indiscriminately; and the pictures on them are, in my estimation, most beautiful. With us they have the effect of selling almost every thing we put them on to, and I can not agree with those who have written disparagingly of lithographic colored labels. For my part I delight to see fine canned goods put up in neat packages, with beautiful pictures on the exterior, indicating the contents; and my experience has been, that a cheap label, as a rule, indicates cheap goods, and a real nice tasty label, nice clean goods. Perhaps my having the above labels for sale may have biased my opinions; but I give them, and you can take them for what they are worth. We will mail you a package of one of each of the above labels as samples, and a sample of the pasteboard box, already labeled, for 5 cts. for postage and packing. I have mentioned this price, because there are so many of you to ask for samples, that I should hardly have enough to go around, otherwise. Friends in Canada will, of course, order directly from D. A. Jones himself.

ENTRANCES IN WINTER.

FOR several years back, and especially since the many reports in regard to wintering with a pretty good draft of air through the cluster of bees, I have been decided that the entrance to the hives should be as large in winter as in summer, even in the most exposed outdoor places. Two or three years ago, the entrances of perhaps three-fourths of our chaff hives were closed so as to admit only two or three bees, during a very cold winter. A few of the hives were neglected, and in every case the bees were brightest and strongest where they had a full entrance open all winter. I know others disagree with me in this, and among others is our old friend D. A. Jones. It may be, that during the spring and fall months there is an advantage in narrowing down the entrance to exclude cold drafts, especially where brood-rearing is going on largely; but in the depth of the winter, when little or no grood is reared or wanted, I think I would have the entrance full width, and then I would have the usual chaff and burlap over the frames, with the Hill device, now so generally used. Of course, this is for outdoor wintering. In cellar, where they are never exposed to a freezing temperature, it would not, perhaps, particularly matter, especially if the cellar happens to be well ventilated, which should always be the case.

SHIPPING-CANS For HONEY.



"Iron-Jacket" Honey-Cans.

I presume the friends are aware that ordinary tin cans are not very safe for shipping full of honey, unless boxed or crated. The cans above are ready to be shipped anywhere.

PRICES.

1 Gallon,	$0.25	each.
2 "	.38	"
3 "	.47	"
5 "	.68	"
10 "	1.10	"

By figuring 11 lbs. of honey to the gallon, you can easily see how many pounds each can holds. They are made from tin plates. A sheet-iron casing, with wood bottom, protects them from bruising. The iron jacket is stronger than wood, and far more serviceable. They neither shrink nor swell, and do not split nor fall apart. Every can is tested by steam, and guaranteed to be tight.

A. I. ROOT, Medina, O.

FOR SALE!

An 80-acre farm in Johnson Co., Mo. Good land, 60 acres of alluvial, none subject to overflow; good locality for bee-keepers; would make an excellent stock farm; church and school privileges; good one-story two-room house, with cellar. Society good. Johnson Co., by census of 1880, was second only to Christian Co., Ill.; 1882-'83, to none. Price only $30 per acre. Terms *very* liberal; only $500 down; rest on 4 years' time. Correspondence solicited.

Address S. P. CULLEY, Warrensburg,
P. O. Box 181, Johnson Co., Mo.,
Or J. U. GATY, Land Agent, or W. E. CRISSEY, for quality of land. 11½-12d

---

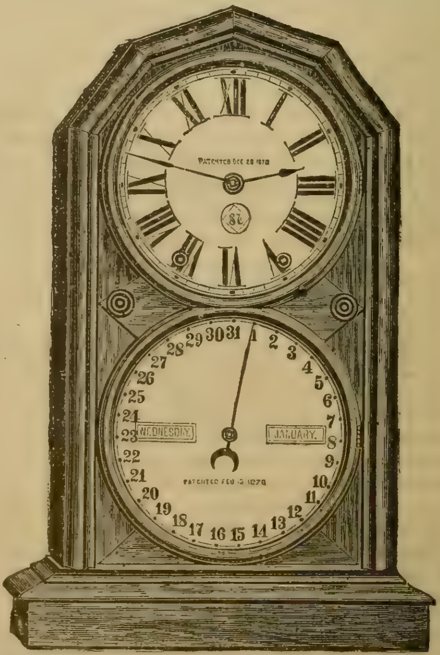
FRUIT AND HONEY.

20 BLACK TARTARIAN CHERRY-TREES BY Express for $1. *Well packed.* These are from two to four feet. Can send 20 small ones by mail postpaid for $1. CHAS. KINGSLEY,
Greeneville, Greene Co., Tenn.

An Opening.

Any doctor desiring as good a *country location* as is to be found in South-east Arkansas, and has as much as $1000 capital, may do well to correspond, inclosing stamp, with R. A. BETHUNE, M. D.,
Snyder, Ashley Co., Arkansas.

THAT CALENDAR CLOCK.



One of our friends asked me what I could get 100 calendar clocks for. After some correspondence I learned I could get them so as to sell to our bee friends at the price given below. The following is a description of them.

The clock is 8-day, spring, strike. The height is twenty inches, and the diameter of the dials eight inches. The case is beautifully finished in mahogany, rosewood, and black walnut. The works are heavy steel and brass. The calendar tells, in large plain figures and words, the day of the week, the day of the month, the month of the year, and makes all the changes for the different numbers of days in each month, even to giving February 29 days one year in four, without a single motion or bit of prompting on your part, only to wind the clock once a week. If the clock runs down by carelessness, you can set the hands of the calendar just as easily as you set the hands of a common clock. This latter feature is a late invention.

Every clock is guaranteed by the Seth Thomas factory, and their name attached to any clock is about the highest praise you can give it. Send on $9.00, and you can have your clock by return express. If ordered with other goods, they can go safely by freight, as each one is securely boxed by itself. They will be shipped from here.

A. I. ROOT, Medina, Ohio.

Contents of this Number.

INDEX OF DEPARTMENTS.

Bee Botany....................—
Bee Entomology..............—
Blasted Hopes.................—
Editorials......................761
Forgettery.....................763
Heads of Grain...............754
Ladies' Department.......760
Remindery..................753
Smilery.........................—
The Growlery...............—
Honey Column.............734
Notes and Queries.........-

INDEX OF HEADS OF GRAIN, NOTES AND QUERIES, AND OTHER SHORT ARTICLES.

Adulteration....................747
Answering Letters............762
Alsike Clover..................761
Are they Italians.............748
Banner Apiary................735
Bees Eating Larvæ..........752
Bee-keeping for Profit.....751
Blacks, Italians, and Syrians 736
Brood for Swarms...........745
Canada, Climate of..........754
Chicago Convention........747
Combs, Age of...............756
Color Hereditary............759
Cuba...........................744
Dhourra.......................752
Drones Building Combs.....754
Drones Congregating.......746
Dysentery and Sugar Syrup 755
Eggs Missing.................752
Feeding on Bottom-board..759
Florida......................756, 760
Foul Brood....................758
Gravenhorst's Bee-Journal 740
Hatching in 14 Days.........756
Hilton's Apiary...............738
Honey, Granulation of......742
Honey, Marketing...........747
Invalids and Bees...........748
Moving Bees.................757
Oak, Honey from...........759
Olefogy.......................745
Orange-blossoms...........754
Our New Office.............761
Overstocking................747
Palestine.....................746
Preventing Sunday sw'g....737
Qu's from Europe by Mail..749
Roach trap...................753
Robbers.......................747
Robbins' New Strain........741
Soporific Plants..............760
Strikes among Bees.........743
"Story of the Bible"........761
Sunday Swarming...........744
Substitute for Wax..........737
Swarming without Clust'g 741
System in Apiculture.......757
Thornton's Report..........755
Ventilation, Bottom.........756
Ventilation, Downward.....758
Ventilation, Lower..........740
Water in Winter............755

FOR SALE. FINE ENGLISH RABBITS, from 2 to 6 months old, $2 to $4 per pair.
A. A. FRADENBURG, Port Washington, Ohio.

A BARGAIN. A second-hand printing outfit for sale cheap. Address
W. H. LAW, Fort Smith, Ark.

FOR SALE.—A Barnes combined Buzz and Scroll saw. Price $25 00.
J. H. COLVILLE, Goshen, Clermont Co., Ohio.
11½-12c

DADANT'S HONEY CROP.

Our honey crop being very large, we offer
THIRTY THOUSAND POUNDS OF EXTRACTED HONEY FOR SALE
AT REASONABLE PRICES.

We have both clover and fall honey. Samples sent on receipt of stamps to pay postage. The honey can be delivered in any shape to suit purchasers.

Send 15 cents for our 24-page pamphlet on harvesting, handling, and marketing extracted honey.

DADANT'S FOUNDATION.

From James Heddon, July 27, 1883. "Your fdn. is certainly the nicest and best handled of any I have seen on the market. It is the only fdn. true to sample, I have ever received."

From Jas. Heddon, Aug. 10, 1883. "I will contract for 2000 lbs. of fdn. for next season on the terms of your letter."

From A. A. Newman, Aug. 24, 1883. "Book my order for 5000 lbs. for spring delivery."

From C F Muth, Sept. 6, 1883. "All of your shipments of fdn. during the season were sold on the day of their arrival."

Dealers, send in your orders for next spring, while wax is cheaper, and thus save trouble and money.
We pay 28c cash for prime wax.

CHAS. DADANT & SON,
HAMILTON, HANCOCK CO., ILL.

BEE-KEEPERS' SUPPLIES.

It will pay to get our prices before purchasing supplies; good Langstroth hives, with 8-inch cap frames, in the flat, 60 cts. each; Langstroth winter-protector, in lots of 50, $1.50 each; small lots, $1.75, all in the flat. Manufactured of good pine lumber. Workmanship unexcelled. Crates, sections, and foundation. **WM. O. BURK,** 8tfd
Successor to Hiram Roop. Crystal, Mont. Co., Mich.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 10tf
*Paul L. Viallon, Bayou Goula, La. 10tfd
*S. F. Newman, Norwalk, Huron Co., O. 10tfd
*Wm. Ballantine, Sago, Musk. Co., O. 10tfd
*D. A. McCord, Oxford, Butler Co., O. 3-2 7tfd
*J. S. Tadlock, box 42, Luling, Caldwell Co., Texas. 2-12
*J. H. Reed, Orleans, Orange Co., Ind. 10tfd
*D. G. Edmiston, Adrian, Len. Co., Mich. 8tfd
*Jas. A. Nelson, L. box 83, Wyandott, Wy. Co., Kan. 6-5
*James P. Sterritt, Sheakleyville, Mercer Co., Pa. 10-3

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 10tfd
L. E. Mercer, Lenox, Taylor Co., Iowa. 4-3

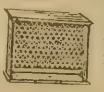
LOOK!

A Perfect MORSE Telegraph Instrument for beginners. Send for catalogue.
5-12d P. B. KINGSLEY, Greeneville, Greene Co., Tenn.

FINE IMPORTED QUEENS

JUST FROM BOLOGNA, ITALY, ONLY $5.00.

Select tested queens, young and prolific, - - $3 00
Tested queens, young and prolific, - - - - - 2 50
No more "dollar" on hand this year.
J. S. TADLOCK, Luling, Caldwell Co., Texas.



FLAT-BOTTOM COMB FOUNDATION.—High side-walls, 4 to 14 square feet to the lb. Circular and samples free. J. VAN DEUSEN & SONS,
Sole Manufacturers,

FDN MILLS 10 INCH $15.00
W. C. PELHAM
MAYSVILLE KY

I WANT TO CONTRACT,

Early as possible, for 100 lbs. of bees and 100 queens (safe arrival). State time can ship, price, etc. Will take a few hybrid queens in the lot.
L. S. BENHAM,
12d MT. BLISS, ANTRIM CO., MICH.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CINCINNATI.—*Honey.*—The market is slow. Arrivals exceed the demand, which, however, has improved some. There is a better demand for comb honey, and supplies are short, which, no doubt, is temporary, as usual. Last year, at about this time, comb honey was at its highest, when our sanguine friends very naturally held on, expecting more. However, large supplies commenced to arrive, and prices kept going down steadily. Bee-keepers in general bent their energies on the production of extracted honey last season, more than ever before. We had a large crop, and extracted honey has been dull so far; not only because of the large supply, but because manufacturers complain of dullness in their business; consequently we have reason to believe that the present slow market is temporary. The present state of the honey market gives our bee-keeping friends another chance for a disappointment; to wit: that of over-production of comb honey another season. This is merely an idea of my own, and our friends may take it for what it is worth.

Extracted honey brings 7@9c on arrival. Best comb honey, 16@17c in small sections.

Beeswax is in good demand at 28@30c.

Nov. 22, 1883. CHAS. F. MUTH,
976 Central Ave., Cincinnati, O.

NEW YORK.—*Honey.*—Taking this unusually warm weather into consideration, which undoubtedly conflicts with the sale of honey to a large extent, we have had a good demand for all grades and styles of comb honey. We received some very large shipments during the last two weeks, consequently have a handsome stock, the finest we ever had on the honey floor, as one of our most practical bee-keepers said, who visited us a few days ago. Extracted clover and basswood is also in good demand, and we dispose of large quantities at fair prices. We quote:

Fancy white-clover, 1-lb. sec's, paper boxes, 21@22c
" " " " " glassed, @19c
" " " 2 and 1½ lb. " " 17@19c
Fair " " 1 and 2 lb. " no glass 17@18c
" " " 2 and 1½ lb. " glassed 15@16c
Ext'd basswood or clover, in kegs and bbls, 9½@10c
" Dark and mixed, " " " " 8@9c
Fancy buckwheat 1 and 2 lb. sec's, no glass 16@17c

Nov. 22, 1883. H. K. & F. B. THURBER & CO.,
Reade & Hudson Sts., N. Y.

CHICAGO.—*Honey.*—Market is without special change. Dealers buy enough to supply their immediate needs. Few, if any, buy more than will carry them through the week at a time. I quote white comb, 1-lb. sections, at 18@20c; 1½ to 2 lb. sections, same grades, 16@18c. Extracted, steady at 8@10c per lb., according to color, body, and flavor.

Beeswax.— Yellow, 33c.; medium, 28@30c.; offerings small. R. A. BURNETT,
Nov. 22, 1883. 161 South Water St., Chicago, Ill.

CLEVELAND.—*Honey*—The honey market still continues very good for best 1 and 2 lb. sections of white; have made several sales recently at 20c, which is 1c better than previous reports. Extracted in every shape continues dull. *Beeswax* scarce at 28 cts. A. C. KENDEL,
Nov. 21, 1883. 115 Ontario St., Cleveland, O.

BOSTON.—*Honey.*—2-lb. sections, 16@17c; 1-lb. sections, 18@20c. Extracted, 10c. No wax.
Nov. 22, 1883. BLAKE & RIPLEY,
57 Chatham St., Boston, Mass.

WANTED.—Extracted honey. All having any to sell will please state kind, price, and how much.
CHAS. D. DUVALL.
Spencerville, Mont. Co., Md.

DETROIT.—*Honey.*—The honey market is growing more active as the season advances. Good comb honey is bringing 18@20 cents. *Beeswax.*—Scarce at 30 cents. A. B. WEED.
Detroit, Nov. 27, 1883.

[Good news, friend W. Thank you.]

I have 2 barrels of honey to sell, in alcohol barrels, painted and waxed, which I will sell at 10c. per lb., package thrown in, delivered at our nearest R. R. depot. S. ROESE.
Maiden Rock, Pierce Co., Wis.

I have 2 bbls. of 500 lbs. each, of nice thick linden honey, that I will sell for 9½c. per lb., and throw in the barrels, and deliver at railroad station.
F. W. HOLMES.
Coopersville, Ottawa Co., Mich., Nov. 22, 1883.

I offer 500 lbs. extracted honey for sale — white-clover and basswood — at reasonable prices. Samples sent on receipt of stamps to pay postage. The honey can be delivered in any shape to suit purchasers. E. PETERMAN.
Waldo, Wis., Nov. 18, 1883.

WANTED.—To exchange samples of honey from all parts of the world, from all the different honey-producing plants. Those wishing to exchange for samples of California white sage, wild buckwheat, sumac, etc , will please drop me a card, stating the different kinds they have. W. W. BLISS.
Duarte, Los Angeles Co., Cal.

I have between 600 and 700 lbs. of white clover and 900 and 1000 lbs. of fall honey, of Dadant's production, that I will take 9c. for on rail or river, at Keokuk, and charge for barrels. I have also about 2000 lbs. white-clover and Spanish-needle honey (equal to clover) in L boxes. I will take 13 cts. on cars.
Belfast, Lee Co., Iowa. J. W. BARLOW.

APIARY FOR SALE.

"**Sweet Home**" **Apiary**, 1½ miles from Belfast, Lee Co., Ia., is for sale right away, with 60 or more colonies of blacks, hybrids, and Italians, in standard L. hives, all in good condition, and heavy. Will take $6.50 per hive on cars here.

Also an 80-acre farm, if desired. Healthful location, and excellent bee-range. Address

J. W. BARLOW,
Belfast, Lee Co., Iowa.

PLEASANT AND PROFITABLE EMPLOYMENT IN RAISING SILK AT A SMALL EXPENSE SILK

Silkworm Eggs, Book of Instructions, and every thing pertaining to Silk Culture, for sale. Send for price list. Order at once, as our supply of eggs is limited. Address *E. A. Woodruff, Medina, O.*
11½-12-1d

IMPORTED CYPRIANS AND SYRIANS!

The undersigned (wholly unassociated with any one else) will visit Cyprus and Syria this winter, and bring back full colonies and nuclei with selected queens, partly of his own raising. Fine queen sent before June 1st, $10; extra fine, $12; during June, $9; extra fine, $10. **Imported Carniolans and Italians.**—Fine queen, before June 1, $6; extra fine, $7; during June, $5; extra fine, $6. Any six queens, 5 per cent off. Ten queens, 10 per cent off. Safe arrival. Freight prepaid to N. Y. Cash orders now 10 per cent less than above prices. A RARE CHANCE!

12d **FRANK BENTON,** Georgen St., 8, Munich, Germany.

BEE-KEEPERS' CIRCULARS

I am fully prepared to execute Circulars and Price Lists in first-class shape. Send for estimates.

GEO. M. GRAY, Medina, O.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES, HONEY, & HOME INTERESTS.

Vol. XI. DEC. 1, 1883. No. 12.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 5 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

Established in 1873.
PUBLISHED SEMI-MONTHLY BY
A. I. ROOT, MEDINA, OHIO.

Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18c per year extra. To all countries NOT of the U. P. U., 42c per year extra.

NOTES FROM THE BANNER APIARY.

No. 49.

MY REPORT.

COMMENCED the season with 74 colonies. Some of them were weak; the majority were in a *fair* condition; a few were strong; 35 colonies were devoted to the production of comb honey, the remainder to queen-rearing and extracted honey. The weather was too cold the whole season; too wet during the fore part, and too dry during the buckwheat honey-harvest. The weather was too cold, the whole season, to rear queens to advantage. In fact, it was the poorest season I ever knew. Just as soon as the weather began to warm up so that the flowers began to secrete honey, then a cold rain would set in and last two or three days, then it would stop, and when it commenced to "warm up," then it would rain again. This plan of operations was continued until the white honey-harvest was over, when we had 700 lbs. of finished sections, and 1200 lbs. of unfinished sections. We fed back 1000 pounds of extracted honey, which increased the number of our finished sections to 2600 lbs. in all. The 35 colonies increased by natural and artificial swarming to 67. The profit on the colonies run for comb honey, if we have no wintering losses, are $12.43 per colony.

From 39 colonies, 392 queens were sold, and 1969 lbs. of extracted honey, while instead of an increase of colonies there was actually a *decrease* to 28 colonies. The profits on these colonies, provided we meet with no losses, are $10.57 per colony.

THE "OTHER SIDE" OF BEE CULTURE.

And now, friends, honestly, if it were not for what I earn by my pen, I should see a pretty close time the coming winter. I am not like the president of our Northern Michigan Association, who "not meeting with the best success," he did not care to have his report "in print." I honor him, however, for "owning up;" there are thousands just like him, except the "owning up" part. If our business can not stand upon a fair representation, then let it go down. I do not believe in this everlasting parade of the beauties and profits of bee-keeping, without something being said upon the other side, when Goodness knows there is enough to be said upon that side; but the trouble is, the most of us are like the president just referred to, minus his candor. Oh! I know that we occasionally get a letter in the Blasted Hopes department, but there always seems to be something on the face of most of these letters that tells us the writers will yet succeed; and then when they *do* succeed, and send in their booming reports, the finger of triumph is pointed to his disconsolate letter in the Blasted Hopes two years ago; but of the thousands of apicultural wrecks that go down and make no sign, we know nothing. Those who have invested their hard dollars in bee-keeping, and failed, and, becoming discouraged, have sold out for a song, or split up their hives for kindling-wood, or used them for feed-boxes, or let the hens or mice build their nests in them; those who have thus miserably failed do not write to the bee-papers and depict, in glowing colors, their misfortunes; while their neighbors never trouble themselves about the matter, except to grin and say, "I told you so." Why do our journals overflow with enthusiasm, and "gush," and tables showing the enormous profits that have been obtained from a few colonies? Other industrial and scientific journals do not indulge in this sort of thing; why should the bee-journals? Do medical journals abound with tables showing that Mr. M. D. commenced with one patient, increased to fifty, and obtained $1000.00 in fees? Far from it. The articles are written with a view to benefit those already in the profession; to help them to conquer disease. Perhaps I have done my share of "gushing," but I thoughtlessly took my cue from the others, and now that I have an opportunity of writing the "other side" of bee-keeping, I think I ought to do so.

BLACKS, ITALIANS, AND SYRIANS.

On page 582. W. H. Proctor says that I "leave it to be inferred, that in a good season they (the Italians) will not gather the most honey." Yes, that is it; Mr. P. expresses it exactly. When the honey is very plentiful, as during the height of white clover, basswood, or buckwheat bloom the blacks hold their own; but, when the flow slacks, or when there is a scarcity of honey from *any* cause, then the Italians, by their energy and greater length of proboscis, show their superiority. In the April and May numbers of GLEANINGS for 1881 is an article upon the comparative merits of the Italians and blacks, that expresses my views much better than I can possibly do. It was written by Rev. L. L. Langstroth, and is the most exhaustive paper upon the subject that I have ever seen. Those who haven't the numbers should send and get them. Each variety has its faults and its excellencies, and the Italians are decidedly ahead; and for the production of extracted honey are as good as any bees with which I am acquainted. I also have a decided preference for the dark leather-colored strains; but, as remarked in a previous article, the German race has excellencies that no producer of comb honey can successfully ignore; and that a combination of the good qualities of both races is better than either race alone.

Judging from my own experience with the Syrians, which has been short, sharp, and stinging, from reading the experience of others, and from attending conventions, I should enumerate their faults as follows: Prolificness, irritableness, and not thoroughly ripening and sealing their honey. Their good qualities are: The ease with which they may be shaken from the combs, and their propensity for building large numbers of queen-cells. I am not certain that this last quality is a desirable one, except for the queen-breeder; but to have bees shake easily from the combs is desirable. With these two exceptions, the Syrians have no good qualities not possessed by the Italians, while they have the above-mentioned undesirable traits *not* possessed by the Italians. The charge against them, that they do not properly ripen and seal their honey, is, I well know, not universal; but it has been made, and *substantiated*, by *some* of our most extensive honey-producers. Perhaps some will be surprised that I class prolificness as a fault. Prolificness, to a certain extent, and at proper seasons, is not a fault; but when carried on at a high pressure, the whole season through, it *is* a fault. With the majority of us, our main surplus is gathered in six weeks; and hives full of bees during these six weeks are all right (but we don't want them to be everlastingly filling up with bees, and swarming all the time, even during this period of six weeks); but to keep on rearing lots of bees after the honey-harvest is over is a useless expenditure of honey. This extra prolificness well suits the man who rears bees for sale by the pound, but *not* the man who raises honey. A. R. Kohnke, on page 560 of *A. B. J.*, current volume, says: "The prolificness of queen, and the industry of colony, do not necessarily go together. I have an Italian colony, the queen of which is very prolific, having kept the hive and 48 sections full of bees ever since June 10. The proceeds from that colony at the end of the season were 9 lbs. of comb honey and of extracted, about as much from unfinished sections; and on examination before putting them up for winter, I did not find more than 9 lbs. of honey in the brood-chamber. The bees looked like what Mr. Heddon calls the 'Golden Italians.' The Germans have done better for me (for comb honey)." The above illustrates the point. It is quality, not *quantity*, of bees that we need. It is *honey* that we are after, not hives full of bees whose only object is to gather honey that they may rear more bees. Of course, bees that are constantly breeding, that will rear brood "so long as there is a drop of honey in the hive," will go into winter with hives full of young bees; but this is no advantage, for the reason that young bees are more liable to suffer from dysentery; and the reason of this is, that the young bees are the nurse-bees, and it is the nurse-bees that do the most handling of pollen. If this theory is not true, it *is* true that Syrians die winters just the same as other bees. I am aware that, by stepping softly, raising the covering slowly, waiting until the bees have "rubbed their eyes" after the "great flood of light has been admitted to the brood-nest," handling the combs without a jar, etc., the Syrians can be handled; but, what practical honey-producer has time for all these preliminaries? Time is money with him.

At the great Northwestern Convention, a gathering that Mr. Langstroth said "represented the largest number of large, successful, practical honey-producers of any convention that he had ever attended," there was only one man who had gentle Syrians, and he said that *they* resembled Italians.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich., Nov., 1883.

Friend H., even at the risk of being accused of having selfish motives in the matter, I want to take you to task a little about what you say on the other side of bee culture. To be sure, there is another side; to be sure, bee-men have to put up with bad seasons and poor results; but I do not think the number who fail is very great compared with other industries. It is true, there are people going into bee culture every year who really seem to have no right to go into it, because failure is almost certain. There are those who get into the grocery business in some way, and fail. I know the grocery business is not written up in glowing terms, as bee culture often is; but I think you get away off from the track when you compare medical journals with bee-journals. Bee culture is a rural industry, like keeping hens, raising berries, going into sorghum, and things of that kind. Do not our agricultural journals give constantly reports of what was done with so many hens, a quarter of an acre of strawberries, or a little patch of sorghum? and is it not right and proper that they should keep doing so? Bee culture has an advantage over these; it arouses and employs the best and noblest minds and intellects, and it can be taken up and tested on a small scale by thousands who would do nothing if they did not have the bees. Boys and girls both find recreation in bee culture that they might otherwise find in pastimes that are a waste of time, to say nothing of harmful amusements. I know we are publishing constantly reports from beginners, and, begging your pardon (and the rest of those who have taken up your line of thought) GLEANINGS means to continue publishing such reports as long as it lives. If boys and girls, and men and women, who have spare time on their hands can be taught a branch of industry by the use of books and papers, and *nothing else*, so they can take it up in one single year, almost, and make a success of it, and close with more money in their pockets than all their expenditures, I should consider it a gift of God more worthy of thankfulness and praise, than if he should send down gold dollars in answer to our longings. Even supposing there be a dark side that does not get into the journals, the great flood of reports from beginners indicates clearly and unmistakably that hundreds — nay, thousands — have been blessed and made happy by bountiful crops of honey, where the labor given was simply a pastime, and afforded them more joy, perhaps, than any thing else they ever did in their lives. It has been said, that the success of GLEANINGS is owing to the pains I have taken to publish letters and answer questions from the great throng of A B C scholars that are growing up, instead of devoting space to learned essays on the coming bee, and theoretical disquistions of that ilk.

PREVENTING SUNDAY SWARMING, &C.

D. A. JONES'S PERFORATED ZINC.

BELIEVING that it is right to hive swarms which can not be kept from issuing on Sunday, let me make some suggestions to those who, like myself, wish on this day to have as little as possible to do with bees.

1. By giving the material for starting queen-cells on Saturday, there will be no occasion to care for them on Sunday.

2. Use some proper device for confining the queens on Sunday, or any other day when you do not wish them to lead out swarms. This is a point to which I have given much attention. On p. 174 of the third edition (1859) of my work I say,—

> "As the queen can not get through an opening 5-32 of an inch high, which will just pass a loaded worker,[*] if the entrance to the hive be contracted to this dimension, she will not be able to leave with a swarm. This method of preventing swarming requires great accuracy of measurement, for a very trifling deviation from the dimensions given will either shut out the loaded worker, or let out the queen. These (adjusted) blocks, if firmly fastened, will exclude mice from the hive in winter. When used to prevent all swarming, it will be necessary to adjust them a little after sunrise and before sunset, to allow the bees to carry out any drones that have died."

In my second edition (1858), p. 202, referring to this device, I say:

> "By this arrangement, all swarming on Sunday, or any other day when the apiarian does not desire it, may be prevented."

Also, p. 203,—

> "It may be found, on further experiment, that the entrances to all the spare honey-receptacles may be so adjusted that the queens will never be able to enter them for the purpose of depositing eggs."

Also, p. 202,—

> "A very important use may be made of blocks thus arranged, to get rid of the drones. In that part of the day when they are in full flight, adjust the blocks so that they can not enter. Toward dark, or early next morning, they will be found sprawled out upon the alighting-board, or hanging in clusters under the portico, and may be given to chickens, which can easily be taught to devour them. In a few days nearly all the drones in the apiary may be thus destroyed."

Further experience showing that it was often quite difficult to maintain the 5-32 of an inch by depressions cut in the entrance-regulating blocks, I fastened a few 5-32 strips with clinching nails between two pieces, each 14⅛ in. long (the length of the usual entrance), the lower strip having two bevels to facilitate the exit and entrance of the bees. A central hole, governed by a cork, allowed dead drones to be easily dragged out, or a young queen to fly for mating. Still the bees would worry from having to crawl too far under such narrow dimensions. At last the 5-32 was cut in a thin metal strip, and such a device enabled me both to prevent my costly imported queens from eloping, or running the risk of being destroyed by stray queens.

On a recent visit to the large apiaries of my friend Mr. D. A. Jones, of Beeton, Ontario, I saw all the points, on which I had labored so long, carried out in a much more satisfactory manner by means of his perforated zinc plates. His *bee-guards*, made of these plates, allow the workers to pass in the freest possible manner, while the ventilation of the hive is not in the least interfered with. The only improvement in them which I can suggest would be to punch out a central hole, governed as in my device, by a small cork. These can be adjusted in a few moments, and Sunday swarming, or swarming on any day not convenient, be prevented without at all worrying the bees. By them, all bad or superfluous drones may be quietly destroyed, by shaking off the bees from their combs, in front of their hive, the queen, of course, being properly rescued. Some may find this the easiest way, more especially with black bees, for finding a queen, or of making it absolutely sure that there is none in a colony to which we wish to introduce a valuable queen. Mr. Jones uses sheets of this perforated zinc to confine the queen to the lower story of the hive, or to any desired part of the brood-chamber, so that she can not enter the surplus-honey receptacles. These sheets also prevent the bees from building small combs between the upper and lower sets of frames—a thing which has often caused so much trouble in hives where more than one story is used.

I see no reason why sections for comb honey may not be set to the best advantage directly on these sheets. Before giving up my apiary I found that small boxes were much more readily filled by Italian bees, when put directly on top of the frames; and that, however admirably the shallow chamber answered for black bees, the Italians plainly wanted nothing to do with it. How much time and money have been spent in trying to control the mating of our queens! As far as practical results are concerned, have we advanced at all beyond the Kohler process, given so many years ago in the *A. B. J.*, by which young queens and drones from a selected stock were made to fly later in the day than the other drones? May we not, by Mr. Jones's bee-guards, make a still closer approximation to the mating of our queens with our best drones? If we are not liable to be troubled by drones outside of our own apiries, how easily we can shut in those that we do not desire to breed from! or, if troubled by drones from bees in the woods, or from stocks too near us, we can confine our young queens, and the drones of selected stocks, until it is so late in the afternoon that the other drones have ceased to fly; then by pouring a little thin sugar syrup in to the proper colonies, we can quickly tempt both queens and drones to take wing with the excited workers. As the power to control the mating of our queens is fully as important as the control of the same point in our domestic animals, I shall never cease to believe that, sooner or later, we shall obtain the desired result.

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[*] Huber does not give the size necessary for confining a queen, but he spoke of a GLASS TUBE adjusted so as to pass out a worker, and not a queen. The smallest queen I ever saw could not get through my blocks. Although the workers are at first slightly annoyed by them, they soon become accustomed to them, as they do not confuse them by presenting the entrance in a new place. The ventilation not depending on this contracted entrance, abundance of air can be given to the bees when the blocks are adjusted so as to confine the queen. Ill health for the last two summers has prevented me from giving this method of preventing swarming such a full trial that I can endorse it, except for temporary purposes. * * * A THEORY which may seem so plausible as almost to amount to positive demonstration, may be encumbered by some unforeseen difficulty, which speedily convinces even the most sanguine that it has no practical value.

The care with which queens and drones can be confined by the Jones bee-guards, without at all lessening the ventilattion of the hive, and with the minimum of interference with any of the labors of the colony, promises to open a wide field for many important processes. It may now be possible, in the hands of careful breeders, not only to keep different races of bees pure in the same apiary, but to build up permanently any desired cross between the different races.

Few bee-keepers, who keep up with the modern improvements, are ignorant of the great services of Mr. Jones, in searching the world, at great expense, to procure the best bees. By his great enterprise he has done more than any one living, to make American bee-keeping known in the Old World. We have been much slower, however, to recognize how much ee has done for practical apiculture by his many ingenious devices, and, most of all, by the costly experiments and machinery by which he secured for us his perfected metal sheets.

Oxford, O., Nov., 1883. L. L. LANGSTROTH.

Friend L., I have many times thought of how nearly you struck on the plan for excluding drones, which we now use so successfully, when you wrote what you have quoted from your book. This illustrates how a great invention may be brought almost to perfection, and then lie right there unused, until something shall give it a start years afterward. We have been using drone-guards in just the way you suggest, ever since we got the perforated sheet zinc. We sometimes, in buying swarms from our friends in the country, get black bees with drones in them. We put them in the hives as usual, and then toward dusk put on the drone-guard over the entrance, shake off all the bees outside the hive, and every drone the hive contains is ready to be killed, or fed to the chickens, as you say, the next morning. Instead of using cork, as you suggest, we have the drone-guard fastened at one end so it can be lifted out of the way when not needed. When we want it to work, we simply push down the movable end and fasten it with a tack. If I am correct, the perforated zinc was used by our friends in England before even friend Jones got hold of it. But who first had the zinc made of the exact size, and when, I am unable to tell. Perhaps our friends of the *British Bee Journal* will be able to enlighten us. We have sold a great quantity of the sheet zinc, and also of the perforated honey-broods during the past season, and I believe all purchasers have expressed themselves as pleased with them, both for keeping the queen out of the sections, and also for preventing the bits of comb uniting the upper and lower stories.

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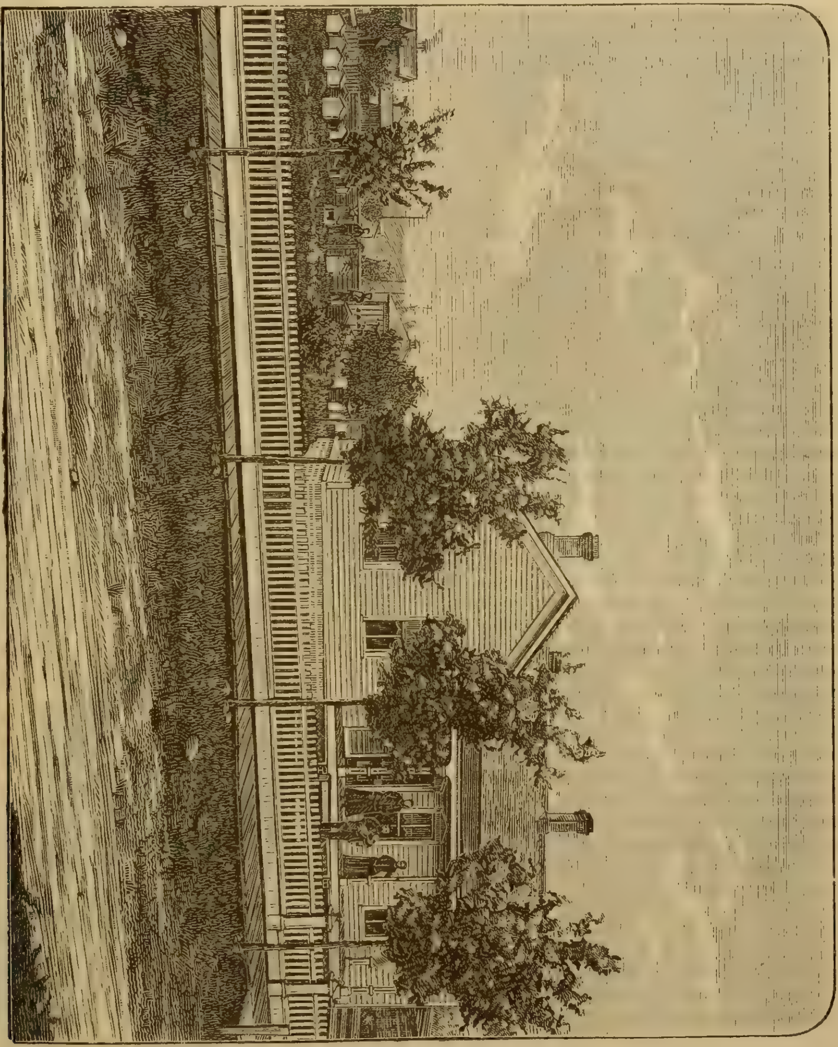
FRIEND HILTON'S HOME AND APIARY.

A GLIMPSE OF A BEE-KEEPER'S PLAYGROUND.

I TAKE pleasure, friends, in presenting you with a sketch of a pretty little home; and I am sure by the looks of things that it is a happy home. How many are there of you who are working and striving for a good comfortable home? and how many are there who have a little bit of a home that needs fixng up and tidying up, as it were? Perhaps there are some who have no home of their own, and are living on rented places; but I opine not many, for most bee-keepers, sooner or later, want a bit of ground of some sort on which to set their hives, where they will not be likely to move very soon. I believe I should want a piece of ground all my own, even if it were not more than a rod or two square. Now while you look at the picture below, I want to talk to you a little about it.

Right up at the left hand of the picture we get a glimpse of the hitching-post near the gate. I have been having quite a study about hitching-posts of late. There are none near our house yet, and our minister said a few days ago that he and his wife would not come to see us and our new baby if I did not have a post fixed to hitch his horse to. Friend H., we are glad to see that you have one. I do not see any ring in it, though; or did the engraver forget to put on any ring? Next we notice that you have a good comfortable sidewalk, made of pine, I suppose, for they build almost every thing of pine in Michigan. Are the stringers supported by stones? or is the ground so sandy they will not rot anyhow? A picket fence is rather pretty, but we have been discussing the advisability of omitting fences in our locality of late. Are those basswood-trees you have got planted out so nicely? if they are not, I think they ought to be; they are growing thriftily. Your neatly fixed house has a very home-like appearance, and I really believe I should like to live there. The house looks to me as though it were just the place where one would be pretty sure to alight upon a good dinner, if he should happen to be along about noon-time. I need hardly tell you how that fatherly-looking chap standing in the doorway with that baby in his arms took my eye. I rather think, when you come right down to it, that it moved me to send the picture to the engraver's, that I might present it here to you in the journal. I should like to know that father, and may be he would let me take the baby a while if I promised to be real careful. I wonder if it is a boy-baby. Possibly his name is Peter. Well, well, friends, we must take a look at the beehives. All chaff hives, and ready for winter. I wonder if that is a house apiary right back of that man with a comb of honey in his hands; and a little further off there are some more buildings. Why, friend H., why don't you stand up and tell us about it yourself? Here, *you* talk:—



THE BEE-KEEPER AT HOME.

Friend Root:—As the busy season is at a close, I thought perhaps you would be pleased to pause for a moment, and see how I look at home; so I mail you to-day an 8x10 photo of my home and a portion of my chaff-hive apiary. The building in the center, that looks like a bee-house, is really my extracting-room and honey-house, and is located in the center of the apiary, so you can see that the shrubbery and dwelling hide at least half of the hives. The hive with the cover raised back on hinges shows the chaff cushion, and is in winter quarters, as are all the rest, although I have an L. frame of comb hanging on the comb-holder in front, and have another in my hands, and a Clark smoker resting on the gable end proper; just as I have things when at work. The friend in the background, near the honey-house, also has an L. frame of honey. The parties in front of the house are my brother Will and family, who are living in my house and making a home for me, as the queen of my household went to heaven last May. I commenced last spring with 35 colonies, and have increased to 57; have taken 2008 lbs. of comb honey, and 1114 lbs. of extracted, making 3122 lbs., or nearly 90 lbs. per colony, spring count, all clover and basswood, as we had no fall honey to speak of. My hives stand in rows both ways, 8 ft. apart, and are so arranged that they are red, white, and blue each way, and I call it my "Red, White, and Blue Apiary." GEO. E. HILTON.

Fremont, Mich., Oct. 15, 1883.

And so, dear friend, there is sadness, after all, hovering over that little home. The loved one has gone; it is sad, I know; and yet you can thank God you know she is in heaven waiting for you.

Heaven and earth shall pass away, but my words shall not pass away.—MARK 13:31.

LOWER VENTILATION, ETC.

SHALL WE ENLARGE OR CONTRACT THE ENTRANCES?

I AM much perplexed in regard to wintering my bees. In the A B C, and in GLEANINGS, you and many others recommend chaff packing to keep them warm. Now, do bees really freeze? or do they become benumbed by the cold, and in a long spell of zero weather consume their stores where they are, and as they can not move, they consequently starve? A neighbor of mine, a box-hive bee-keeper, who winters his bees on their summer stands, says he leaves the hives raised up off the bottom-board from ½ to ¾ of an inch all around, and has no losses, if they have honey enough. He used to close up, except a small entrance, and would lose some every winter. You also recommend leaving the entrance open wide, even in the coldest weather. Now, what is the use of a warm house, if we leave the door wide open? Four or five years ago, during about five weeks of December and January, the thermometer ranged from 10° above to 10° below zero every night, and did not get above freezing during the day. That winter about half the bees in this section died, and they nearly all had honey in the hives. One man lost all he had outside; but had 3 hives in the cellar that came through all right. Quite often we hear of losses coupled with the remark, "Chaff packing would not save them."

The conclusion I have arrived at, is this: That a single-walled hive will warm up as quick, or quicker, than one with double walls, on a bright sunny day, and give the bees a chance to move to where their stores are; and, if we are having a long spell of zero weather, we had better move all hives (whether packed in chaff or not), to the cellar until the weather moderates.

F. A. HAYES.

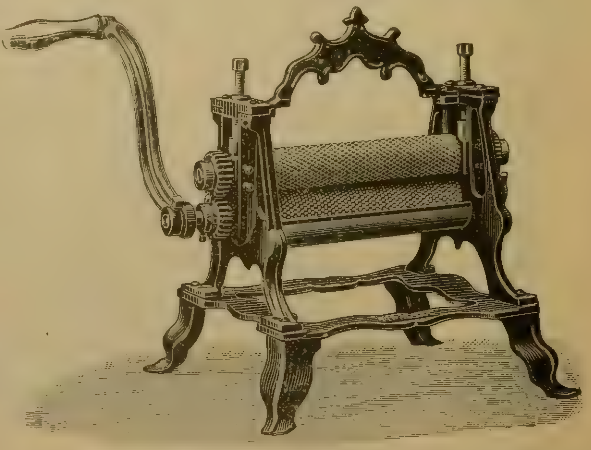
Montoursville, Pa., Nov. 23, 1883.

Friend H., there is something a little contradictory here; but both sides are right, I think. We have had abundant evidence that bees winter with a large amount of ventilation, where they do not otherwise. I think there is a good deal of use in having a warm house, even if we leave the door wide open. Go into any crowded audience, and you will soon feel the need of having a door wide open, or several of them. But at the same time we feel this need, we also need a good warm structure for the crowded audience, especially if the weather be severely cold. So it is with the bee-hive. The value of chaff packing and chaff cushions has been abundantly proven; but at the same time, we want to make ample provision for plenty of pure air for this crowded "audience" inside of the walls and under the chaff cushions. Our crowded audience would suffer in a barn, and our audience of bees would also suffer in a thin-walled hive, in fact, when they would not in the chaff-packed hive. I think the A B C book will make this plain to you. Now, another point comes in here: Bees in single-walled hives get dried out and warmed up during a sunshiny wintry day, when those in chaff hives would not; and on this account, thin hives in the springtime have a certain advantage over chaff-packed ones. This advantage, however, is overbalanced by the use of chaff hives at other times.

FRIEND GRAVENHORST'S NEW JOURNAL.

ANOTHER PUBLICATION IN THE GERMAN LANGUAGE.

THERE can be no better evidence of the deep hold that bee-keeping is making on the minds of the people, than the large number of journals devoted to the dissemination of apicultural knowledge. Among the latest is one from Germany, entitled the "*Deutsche Illustrierte Bienenzeitung*," edited by that able scholar and apiculturist, C. J. H. Gravenhorst. It contains 32 pages, a little smaller than these, elegantly illustrated. The extreme fineness of the cuts in this journal is certainly a wonder. Only in the high-priced magazines, such as *Harper's* and the *Century*, can we find their equal. As an example, we herewith give a cut of our fdn. mill, which friend G. had engraved from a photograph we sent him.



The literary contents of the journal are of the highest order, and will be eagerly read by all acquainted with the German language. We commend the magazine as one of the best, and fully up to the times. As the price is only $1.00 per year, we will club it with GLEANINGS at the same price. You may send subscriptions to us, or to friend G., as you choose. Perhaps you had better send to him for samples, as we have none in stock. His address is Braunschweig, Germany.

BEES GOING OFF WITHOUT CLUSTERING.

SOMETHING FROM OLEFOGY HIMSELF ON THE SUBJECT.

WELL, well! here comes Olefogy again with his batch of stuff about bees swarming and going off without settling. We thought we had him snowed under so deep that he'd never smile again. Oh, no! I was not dead, only sleeping; or, rather, waiting for you to muster up all your score of witnesses, and I believe now about that number have testified to having seen such phenomena as bees swarming and going right off without ever settling "at all at all." And now let us hear the conclusion of the whole matter. What per cent of the bees that swarm go off without clustering? Is it one-tenth of one per cent? I have an idea it is not more than one in ten thousand, and may be not more than one in a million, for I believe that God created bees for the use of man — domestic insects, if you please; and when he gave them the swarming instinct, and blessed them, and commanded them to multiply, etc., he also gave them the clustering instinct that man might make them useful, if he would (I don't believe that bees were evolved from gnats or ants, but they were made bees at the beginning); and I suppose when father Adam fell from his first estate the bees became somewhat demoralized, and hence their disposition to sometimes give us the "cold shoulder," and sometimes the "hot tail," and sometimes they cut all kinds of queer and unaccountable tantrums; but for all that, I don't see that we need be afraid of losing many bees by their going off without clustering, to give us a chance to hive them; and no one in all this mighty snow-storm of witnesses seems to be alarmed, except friend Train, of Mauston, Wis. (see page 380, GLEANINGS for July, 1883), whose bees are so possessed that he has to stand guard over himself (it won't do to trust a small boy or woman) with a big looking-glass and double-barreled shotgun loaded with shot — dear me! I should think when the bees see themselves in that looking-glass they'd be ashamed of themselves, and "hasten down and beg the old man's pardon;" but I infer from what he says, that some of them cheek it out till he tries what virtue there is in shot — ah me! That is a deplorable state of affairs. I believe if I were in his place I would move my bees all to that heavy basswood forest so as to put a stop to that kind of business; for it seems to me he is in a fair way to breed the clustering instinct all out of his bees while the swarming instinct is intensified. Oh! well, they will replenish the earth all the same, and make a good opening for bee-hunters; so, perhaps, it will be all right in the end, any way.

> "Know nature's children all divide their care;
> The fur that warms a monarch warmed a bear.
> While man exclaims, See all things for my use,
> See man for mine, replies a pampered goose."

I have something to say in regard to swarms deserting the hive when they have unsealed brood given them; but this is, perhaps, already too long, so I will subscribe myself, Yours truly, OLEFOGY.

Allendale, Ill., Nov. 6, 1883.

Friend Olefogy, we are glad indeed to hear from you again; but it seems to me you are a little stubborn. After all this accumulation of evidence, ought you not to own up in a little more teachable spirit? May be I am stubborn too; but to make an off-hand estimate, I should think that about one swarm in a hundred goes off without clustering; but may be one in 500 would be more modest. Perhaps it is not a matter of very great importance, after all; only if bees do go off without clustering, now and then, it is well for the bee-keeper to know it. I agree with you, that there may be a providence in having them go off now and then in just that way, just as there seems to be a sort of providence in having uneasy people who are always moving about, and thus help to settle new countries. There is one thing certain: You seem to have a happy faculty for making a "stir in the meeting," and inducing many of the brethern—aye, and some of the sisters too — to stand up and relate their experience, who might otherwise have never let anybody know that they kept bees or read the bee-journals.

A HARDY AND DESIRABLE STRAIN OF BEES.

IS IT A MERE MATTER OF ACCIDENT, OR AN ESTABLISHED CHARACTERISTIC OF THIS PARTICULAR STRAIN OF BEES?

WELL, I will try to tell you about them, or, rather, all that I know of them. A Mr. Baker, formerly of Vanburen, O., but now living in the West, kept, for quite a series of years, an apiary, taking an interest in obtaining the best strains of bees that he could buy from different breeders. Just prior to Mr. Baker's selling out and going west, a Mr. Baird purchased a fine selected stock of bees from this apiary, being the spring of 1879. One year later, Mr. Baird sold these same bees to a neighbor of mine, Mr. A. J. Shirk. Mr. S., not being suited with the hive used by Mr. Baker, came to me, and had his bees transferred to the L. frame and Simplicity hive. This was in the spring of 1880.

Now, for results: These bees were wintered in the same hive, on their summer stands, without any artificial protection, not even a windbreak, except an ordinary board fence, and that stood 3 or 4 rods from the hives. You will all doubtless remember the terrible results of the following winter, 1880 and '81, in which many lost all the bees they had. Yet these bees came through the ordeal of that winter without any loss, and showing no signs of the hardships they had passed through, being strong, clean, and healthy.

I will now compare these bees with others, to illustrate their remarkable hardiness in withstanding the rigors of winter as well as the active voyaging of wing in summer. During the same spring I transferred 46 stocks for other parties in the same vicinity, putting all in Simplicity hives; these 46 stocks consisted of blacks, hybrids, and full-blood Italians, and were wintered in like manner, except in three cases, where windbreaks were provided. When spring came, three out of this number had survived; loss 43, and the increase 21; total loss, 64 stocks. My own loss was 21 stocks out of 30; all were packed with 3 inches of dry chaff around body of hive, and chaff cushions over brood-chamber. A Mr. Lee, of our vicinity, a box-hive man, lost 28 out of 31. A Mr. Night lost 133 out of 136; these last were in Gallup hives.

Well, with these facts and figures before one, is it any wonder that I should have an eye upon this strain of bees? and as I am strongly opposed to jumping at conclusions, I have taken years to watch and investigate this characteristic, during which time not a colony of these bees has ever suffered from any cause, so far as we can discover, until I am now compelled to accept the fact, although contrary to previous conceived ideas, that this strain of bees possesses remarkable traits of hardiness that I never saw in any other bees.

DESCRIPTION.

The bees are three-banded; color, dark orange; in form they are more slender than Italians in general; in movement they are active and rapid; in leaving or returning to the hive they present a waspish or bristling appearance, with wings widely spread and highly elevated; are first-class comb-builders and honey-gatherers. I have obtained a selected stock of these bees, and have requeened a part of my home apiary this season. I have arranged so as to be able to produce queens of this strain another season. The queens, like the workers, are a little on the slender style, but long of body; in color, a little on the dark, being a light mahogany, yet they are beauties. Perhaps their appearance is somewhat due to the care with which I breed them, having grown all cells in a powerful colony; that is, fed and kept right up to the swarming-point. I am fully persuaded, that, to get the best results in queen-rearing, we must exercise great care in the production of the cells.

Now, in conclusion, friend Root, what should be done? It seems to me, although we place the above facts as prospective only, that there is a sufficient probability in justifying us in the conclusion, that this strain of bees should be utilized to the benefit of bee-keepers, especially throughout the cold bleak regions of the North. And as Mr. Shirk is not a practical bee-keeper, and therefore does not understand queen-rearing, this labor, if done, will necessarily devolve upon some one else; and as this vicinity will be well supplied with this strain of drones by next season, it would be better to raise the queens here. I have not bees enough to go into the queen trade extensively, yet I could buy enough in the spring to form my nuclei.

Bloomdale, O., Nov. 19, 1883. R. B. Robbins.

Friend R., this is, of course, a very important matter to me; and had the bees you mention been brought from Japan or Africa, or, perhaps, better still, Nova Scotia or Iceland, I should have faith that they possess some prominent desirable quality. As it is, I am inclined to think the success you mention was more accidental than because the bees were especially different from any other bees. Perhaps it is no more than fair to inform our readers that friend R. proposes to follow this article with an advertisement, and offer queens for sale during the coming season. Now, although I am sure, from the above letter, that he is honest and conscientious in the matter, he would have to be rather more than human if he did not unconsciously get to be a little biased in their favor when he goes into the business of selling stock. Another thing: I have taken pains to test quite a number of colonies that seemed to show remarkable qualities, but I have not been satisfied that their progeny had any very perceptible advantage over the common run of good Italians. Our red-clover queen, it is true, seemed to give us a good many extra queens, but I am not sure they were much, if any, above queens reared from any other choice queen. Now, then, friends, after this word of counsel, I should be glad to see the strain of bees possessed by friend R. fully tested.—In regard to the matter of wintering, I believe it is a common occurrence to have particular stocks in almost every apiary that winter safely year after year, and that, too, with no extra protection. Sometimes this is the rule only so long as the queen lasts. Again, I have had reason to think the combs the bees winter on, or some accidental peculiarity of the hive, had something to do with it. Also some accidental protection from the wind, which the owner never thought of, may have quite a marked influence on this result. I am inclined to think something of this kind is the case with the bees mentioned above, although I may be mistaken. I suppose, of course, the bees are good Italians. It seems to me, also, that the queens should be furnished at about the usual price, or a little more, for any good queen-breeder could rear a thousand queens or more without trouble, from any particular queen.

THE GRANULATION OF HONEY.

Also a Splendid Report from Friend Pettit, of Belmont, Can.

$1000 WORTH OF HONEY FROM 72 COLONIES.

NOW that my honey crop is disposed of, I send you my report for 1883. Fall of 1882 I went into winter quarters with 72 stocks. The present season I disposed of 7542 lbs. of extracted honey for $970.53. For use in the house, estimated at 225 lbs., which will make $1000 nicely. I go into winter quarters now with 76 stocks. I had a large quantity of late dark honey, which has reduced my average price considerably. Inclosed you will find a resolution and discussion on the granulation of honey, clipped from the Toronto *Globe* of Sept. 21, 1883, which took place after you left the N. A. Convention. The resolution was intended as an educator of the public. We must not give up the battle until the people know the truth in this matter; then as a class we will stand better before the people, and the adulterated article will be forced to take a back seat.

GRANULATED HONEY.

A resolution was presented by Mr. S. T. Pettit, seconded by Mr. C. F. Muth, pledging the Association to do all in its power to convince the public that granulated honey was natural and wholesome.

Mr. Pettit said that the lack of knowledge on this subject by the public was a great drawback to the business, and a direct inducement to unscrupulous parties to adulterate the honey or get up some mixture which the public would accept as pure because it would not granulate. It was claimed by some that honey could be put up so that it would not granulate, but he doubted it. Certainly, pure honey would granulate.

Mr. Muth said bee-keepers knew very well that pure honey would granulate, but the public did not know it. It was necessary to educate the public on this question. He had been offered a recipe by a druggist, by which it was claimed honey could be put up so it would not granulate. The druggist wanted $5 or $10 for the recipe, but he (Mr. Muth) said he would not give a five-cent piece for it. If the honey business was to be made a success, it must be done by selling the honey in its pure and natural state, and the public must learn that pure honey would granulate. He knew, as a matter of fact, that in France and Germany granulated honey was preferred.

Rev. W. F. Clarke.—It would be better if we would state that granulation is a proof of purity.

Mr. Hart mentioned that there were good authorities who claimed that honey could be put up so that it would not granulate, and he doubted the advisability of putting in the motion that all pure honey would granulate. Mr. Spence and Mr. Pringle also doubted that the association should be committed to that statement.

Rev. Mr. Langstroth said he never saw pure honey that would not granulate, but he mentioned also that he had seen honey from Mexico which granulated or thickened like lard or butter — perfectly smooth.

Mr. Muth said that in his storehouse every winter they liquefied the honey. Sometimes it granulated smooth like lard, sometimes with a very heavy grain like small peas.

Mr. Jones, from his experience, found that Canada-thistle honey would granulate like lard, while basswood and buckwheat honey thickened in heavy crystals.

Several suggestions were made by members as to the resolution, but finally it was presented and passed in the following shape: "That we, as individuals and as an association, do all in our power, by precept and practice, to convince the public that granulated honey is natural, wholesome, and desirable, and that granulation is a fine test of its purity."

Belmont, Ont., Can., Nov. 14, 1883. S. T. PETTIT.

I like your resolution, friends, but I think it should be borne in mind that we have California honey, and honey from other sources from other parts of the world, which does not granulate at all, or not, at least, for a great while. We had several samples of honey that would stand outdoors during a zero freeze, and show no signs of granulation, and I have kept it that way all winter long. It was not thin honey either; because when frozen stiff, a tumbler full could be inverted without scarcely moving, and yet it was so clear that print could be read through it. By all means, let us overcome the idea that granulation indicates any thing unnatural.

SWARMING, AND SECTION HONEY.

"STRIKES" AMONG THE BEES, ETC.

ON page 579, Mrs. M. A. Shepherd writes: "Will Mr. Doolittle tell us *exactly* how he manages when his bees are working in sections, and swarm? Neither the old stand nor the swarm will be strong enough to work in sections, and perhaps the best of the season may be over before they are ready again." Here is a question of great importance to the apiarist who is working for section honey. I said on these pages some time ago, that the great secret of producing honey was in getting the bees strong in just the right time for the honey harvest, neither too early nor too late, on the principle that, if a man had a field of grain to harvest, he would hire the laborers when the grain was ripe; not before, and not afterward, and employ as few at all other times as would be consistent with preparing for the harvest. Just so I say to-day; and he or she who becomes a successful honey-producer will sooner or later view the matter in the same light.

But, Mrs. S. now comes forward with the very pertinent question, saying, after the man has hired his help, and they have worked a few days in the field of ripened grain, thus becoming efficient laborers, suppose they should strike for higher wages, and neglect the field of grain, what is to be done with them, or how shall such a strike be prevented? We all know how damaging to any business is a strike of the employees; and any person having had the care of bees for a year or so knows that a colony of bees having the swarming fever in the honey-harvest, is fully as damaging to the prospect of the bee-keeper as is a strike of telegraph operators, etc., to the interests of those who employ them. To avoid such a condition of things, then, should be the aim of those wishing to secure the best results from their bees. Different bee-keepers have different ways of trying to overcome the swarming fever, such as cutting out queen-cells, etc., many of which often prove inefficient in securing the desired result. After trying nearly all the plans I have read of, and many of my own devising, I have adopted the following, which gives me the best results of any thing so far tried. Our main honey-harvest occurs, as a rule, during the last 20 days of July: hence, to secure the best results, all swarming should be done as far as possible by the 2d or 3d of that month. No swarms should be hived which issue before June 20; for if such are hived, the probability is that they will want to swarm again about July 20, which is at the very time we desire to avoid swarming, or a disposition to swarm, as much as possible. To keep the swarming fever down previous to June 20, I take brood and bees from the stronger, and give to the weaker, till all are equalized, or brought so they are nearly ready to swarm at about the same time; and if this comes sooner than 20 or 25 days before the honey-harvest, swarming is kept back by taking a frame of brood and bees from each, and forming other colonies or nuclei with them. By taking 9 such frames of brood and bees (I use 9 frames in a hive), and placing them in a hive together with a queen, a full colony is made at once, which in a few days will be as strong as any; while by taking the 9 frames away we have kept 9 hives from swarming for a few days. When the proper time arrives for the swarming to be done to the best advantage, all swarms are hived separately as they issue, for the first week or so, as these are early enough to get their hives in proper shape for the harvest, with no disposition to swarm again the same year. After this week has elapsed, two swarms are hived together in one hive, if they issue near the same time, so it can be done; and if not, the new swarm is placed on the stand of another colony which has not swarmed, moving such colony a rod or two away, thus securing to the new swarm all the field bees from the colony moved, and giving them nearly the same working force they would have had if two swarms had been hived together. The colony moved is prevented from a desire to swarm, as it is so weakened by the loss of bees that no further attempt is made to swarm, as a general thing. If all have not swarmed up to 6 days before the general honey-harvest, they are made artificially in the following manner:

An empty hive is procured and set beside a colony which has not swarmed, which I will call No. 1. No. 1 is now opened, and all the frames taken out, and frames of empty comb or fdn. is set in their places; sections are put back on, and hive closed, when all the bees are shaken in front of their old hive, which they readily enter. The frames of brood devoid of bees are placed in the empty hive, except one, which is taken to a nucleus, and exchanged for a frame of brood, bees, and queen. Set this frame having the queen in the hive having the brood, and put on the sections. Having done this, go to another hive that has not swarmed, which we will call No. 2, and move it a rod or two away, placing the hive prepared with brood, queen, etc., on stand No. 2, occupied. By this plan I make one new swarm from two old ones, thereby doing away with the swarming fever, yet having all in good working condition, when the honey-harvest arrives.

By all these plans, the object to be secured is to get rid of the swarming fever, and yet have all swarms strong enough to do good work in the sections. But, says one, do you always succeed? No, not always; for once in awhile a swarm will issue from a hive that ought to be contented to labor with a will, in sections. In such a case I adopt one of the two following methods. 1. When a swarm issues during the honey-harvest, I catch and cage the queen (this is easily done when the queen's wings are clipped), placing the cage in one of the sections, leaving her there for 5 days, when the hive is opened and all the honey extracted from the brood-frames, cutting off all queen-cells while so doing. Now let the queen out, and you will see a swarm work as if they meant "business."

2. The new swarm is hived in a hive containing but 4 frames of empty comb or fdn., setting it on the stand of the old colony, and putting the sections from the old colony on the swarm, having the sections surround the 4 frames given. This compels the bees to do most of their work in the sections; and as they have nearly or quite all the working force, as much section honey is obtained as would have been had they not swarmed.

The old colony will get in good shape for winter, while 3 or 4 frames of sealed honey from some stock worked for extracted honey will make the new swarm all right for winter.

The above are the plans I use; and all I will say in favor of them is, that they please me, and enable me to secure a tolerably fair crop of honey year after year.

HIVING BEES ON SUNDAY.

In regard to hiving bees on the Sabbath, I have little to say. I believe God can be as acceptably served, many times, by sitting under the shade of some tree, listening to the hum of the bees, and communing with our own hearts, asking our heavenly Father that he will so guide us by the Holy Spirit, that our daily lives may *always* be to his honor and glory, and for the conversion of those about us, as by going to church, and returning from the same, ready to find fault with a brother who differs with us as to how the Sabbath is to be kept. I believe in attending church; but I also believe that we may become so strenuous about the letter of the law regarding the Sabbath that we may forget the better and more spiritual part of it, which is, that each Sabbath shall be spent so that, at the end of it, we can say we are one Sabbath-day nearer God's kingdom.

G. M. DOOLITTLE.

Borodino, N. Y., Nov. 7, 1883.

BEE-KEEPING IN THE ISLAND OF CUBA.

A BIG MOVE IN THE RIGHT DIRECTION.

OUR readers who take the *Bee-keepers' Magazine* are doubtless aware that our veteran bee-keeper and editor, A. J. King, has gone to assist in starting an apiary in the island of Cuba. The minute I saw the notice that he had gone, and the letter from him personally, I felt like saying I should like to go too. Well, friends, I can not go, but I am lucky enough to be able to give you a good letter from Mr. A. W. Osburn, the proprietor of the 100 colonies the friends have taken to Cuba.

Editor Gleanings:—On the 19th of last month we sat foot upon King Alfonzo's domain, and took our first look at Cuba. We had left the grand old steamship Niagara, that had brought us in safety from New York, and with our 100 colonies of bees, with all the modern "fixins," we took the cars for this place, 18 miles north-east of Havana. Our bees stood the voyage well, every colony being alive when they arrived at San Miguel. But owing to the hot sun, and the delays that seemed impossible to avoid, in 3 days after our arrival 8 colonies had gone to that good place where all good Italians go, leaving us 92 to astonish the natives with, and to begin bee-keeping in this tropical climate, where the sun pours down its genial rays, and the flowers bloom 12 months in the year.

Of the honey-flow of Cuba I can not speak with that surety that long experience would give; but from what I have seen, I think very favorably of it. Of course, our bees were comparatively weak when they landed here, having been purposely shipped light in bees to avoid smothering while on the voyage; but notwithstanding their weak condition, they are gathering more honey than I ever saw colonies with no more bees than they have do. There are two great things that contribute to this happy result. First, there is plenty of honey to gather; second, owing to the warm weather, no extra number of bees are required to stay at home to keep the brood warm, and the nights are delightfully warm. The queen has every chance to spread her brood, with no fear that it will be chilled. As I said before, the nights are warm, the mornings are warm, and the days and evenings are warm. As an evidence, let me say that, in the morning as soon as there is any light, I hear the hum of ten thousand little wings, wending their way for the early drop of nectar while it sparkles with the morning dew. They work with great energy until about 10 o'clock when there is a perceptible slacking off, till 3 in the afternoon, when business is again resumed; and until it is dark they cease nor tire not; but each one trying to outdo the other, loads himself with pollen and honey to the utmost capacity.

Of the honey, I have a good report to make. It has a rich and native sweetness that, to my taste, is superior to white clover or basswood of the North. The native Cubans tell us that next month, Dec., they consider rather the best month in the year for surplus. I am going to see how it compares with the North, or with the best years in California. Of the different kinds of flowers from which the bees gather the honey from here, I shall have to wait till some future article before I can give your readers the names of them.

Of the face of the country (what I have seen of it), it is delightful; the land is rolling, with springs and little brooks in proximity to one another. The water is as good as I ever tasted in any country. One great feature of beauty is the palm-trees. They skirt the banks of every streamlet; their trunks are smooth and slick; their dark-green foliage, towering far above any of the trees of the forest, makes them the one grand feature of loveliness in this tropical picture of nature. I speak of the palm, because it is the one ideal thing that fills my eyes full to overflowing. There are other trees that are lovely, that are really beautiful, whose names I do not know; but the orange, the lemon, the lime, and the pineapple, grow in great perfection here; and, in fact, I never tasted any of the above fruit, so perfect in form and flavor, until I came to Cuba. Now while I write, not 30 ft. away, and where the bees have to fly under its mammoth leaves to get to their hives, stands a beautiful banana-tree, loaded with the ripening fruit. The great Giver of all good has richly bestowed his blessings upon this country, and I have now the great honor of being the first to establish and put in running order the first apiary upon the improved or modern plan, that some of the native sweetness of this God-blessed country may be gathered and tightly put into barrels, and safely shipped to the hungry millions of the North, and of Europe.

A. W. OSBURN.

San Miguel de Iarnco, Cuba, Nov. 11, 1883.

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SWARMS DESERTING THE HIVE WHEN THEY HAVE OPEN BROOD GIVEN THEM.

"OLEFOGY" COMES DOWN HANDSOMELY, AND RENOUNCES HIS HERESY.

WELL, Bro. Root, as there has been some discussion on this subject of late, I feel like casting in my mite, for I have had a new experience this season, and I'm afraid I'm "almost persuaded." I have for several years practiced invariably giving swarms, when I hived them, a comb of unsealed brood, and I always put the comb of brood in the hive first, and then hived the bees on it; and as I never had lost a swarm by desertion, I had about concluded that there was no use in anybody losing bees in that way; but, alas! it took only two refractory swarms to knock the conceit clean out of me. And now for the experience.

June 1st, hive No. 24 swarmed, and I hived the swarm in the orthodox way; numbered the hive 33, put them on the stand, shaded them well, and went on my way rejoicing. Well, they worked all right for two days; but on the 3d day of June the swarming fever became epidemic among the bees, and No. 33 caught the complaint, and out they came, and settled with a swarm from No. 15, which had just preceded them on a peach-tree limb. Well, they were both large swarms, and when united made one whopper; but I didn't want to try to divide them; was scarce of hives anyhow, and, in fact, I didn't know but that 33 had left their hive because they felt lonesome by themselves. I didn't know but they'd left just to get away from the "young uns." So I just put them all in the same hive 33 had left, and they filled it so full that I put the super on to give them room. When I had them nearly all in the hive, I saw the bees balling a queen; and when I took her away from them I knew her. She belonged to 33, and I had called her my gipsy queen (and she has a history; but, never mind that now), so I put her back in 24, where she came from 2 days before, so that left one queen with a rousing big swarm of bees, and a nice start of comb, honey, brood, and eggs. Well, they stayed there two days, and worked away like "good little insex;" but on the 5th of June, when I was climbing that big elm-tree, "you know," to get a swarm down out of the top of it, don't you think 33 came out and went right off? Do you ask if they settled? No, they didn't "settle" *with me*. Well, I shouldn't have followed them, if I hadn't been up in the tree, nor tried to *settle* them "mit a bell" either, as neighbor R. says; but neighbor C. followed them about a mile, and saw them go into a tree. Now, I call that a clear case of willful desertion, and they must have had that tree picked out to go to; but why they would leave a nice comfortable hive to go to a dirty old tree, is more than I can understand.

My next experience was on the 12th of July. A fine big swarm of Italians came out and settled; and when I went to hive them — well, there is no use talking; they were the "illest" bees I ever undertook to hive. "Coming bee" (?). I think I should prefer them not quite so "coming." I tell you, they plied their stings for all they were worth; but then, as I am no hand to run I stood my ground, with the exception of jumping down off the ladder a few times, and crouching down and sticking my head under some pie-plants that grew hard by, just to give them a little time to consider, you know; but they wouldn't "consider" worth a cent; and then my better half, she got sorry for me, and took the bonnet off her own head and thrashed the bees off from me with it, and then she over (?) persuaded me to let her fix her Sunday go-to-meetin' veil over my face, and buckskin gloves on my hands, and then with a free use of water and smoke we got them nicely hived and on their stand, all snug and well shaded, just at noon; and I went to the shop and left my wife and two blue-eyed girls to watch the bees; and when I came home at night they said the bees were gone, and they couldn't tell how they went, nor where they went to; for they were right there all the time, and didn't know how they could have got away without their knowing it, and they did not go into any other hive there either. Now, I call that a clear case of willful desertion, and that with malice aforethought, for it looks to me as if they did it on purpose to get even with me, because I had beaten them in the first battle; for they had the infallible comb of brood, and every thing necessary to make them comfortable, and still they "don't been habby."

Well, now, I don't know what others may think about it; but for me, it will not take much more of such experience as that to convert me, and then I shall have to join Bro. Doolittle.

OLEFOGY,

F. S. C.

Allendale, Ill., Nov., 1883.

Well, I declare, friend F., I used to think that when a man once advocated a certain doctrine as vehemently as you did yours, it was an almost unheard-of thing to come right down squarely and own up. You certainly ought to have a medal or a diploma, or something of that sort, for setting an example of frankness and ingenuousness, before our younger brethren. You can not tell why those bees swarmed out that way. I wonder if they had not heard about the way folks are giving it to you through the bee-journals, and concluded they would turn in and add their mite to the general fund of knowledge by coming right out before your eyes, and demonstrating your error. — Give my respects to your good wife, and tell her that we think you ought to be happy, even if you have been whipped out so badly on the swarming business. I really am not certain my wife would do as much as that, lend me her Sunday go-to-meeting bonnet and veil, and turn in and help fight. May be she would, though, for we very seldom give our wives the credit they deserve, if I am correct in the matter.

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FROM PALESTINE.

HONEY FROM THE SEBESTEN-TREE, AND HOW THE BEE-EATER IS CAPTURED, ETC.

EVERYBODY knows, it is a long, long way from America across the Atlantic Ocean, the whole continent of Europe, and last the Mediterranean Sea, till it reaches the port of Jaffa, taking our journals to such an out-of-the-way place as Jerusalem. But, having come up to the Lebanon for some months, it was longer still before my eyes met with the interesting article published by friend Benton, about the bee-eater, on page 283, of JUVENILE GLEANINGS for May. I, too, was very much astonished to find friend Benton's excellent memory failing him in describing that sticky substance to catch birds. The sebesten-tree (*Cordia Myxa*) is a middle-sized, irregular-growing tree, with ovate leaves, very smooth on its superior surface, rough below; it has small whitish flowers, blossoming about the end of May, at which time I observed numbers of bees swarming about it, eagerly getting honey, that time being the end of the cactus-blossoms, affording the bees much honey. Pity to say, there are but few trees in the neighborhood and in surrounding villages; for should there be orchards of them here, our bees would infallibly have another honey harvest for the first part of June.

This tree has an egg-shaped fruit called the sebesten plum, which is succulent, mucilaginous, and emollient, with some astringency, and has a sweetish taste. It has a thick peel, and in the midst of the mucilaginous substance is bedded a kernel, filling up almost all the space. The fruit is about the size of a grape, and hanging down in similar bunches, excepting the fruits in the bunches to be scarcer, though there are great numbers of bunches. It ripens about the end of August, and is almost yellow. It is then gathered by the owner, and every fruit is to be cut open. The most curious way is employed to get out the substance. The fruits are sucked out one by one, and spit into a big mold, or chaldron, together with the kernels; there it is beaten together for some time, till it foams well, and a solution of yellow arsenic (tersulphide of arsenic) with water at the rate of 1% is mixed to it, and the beating is continued for another while, which last solution probably was mixed to prevent it from fermentation, or give it a greenish hue, as they told me.

Flexible whips from olive, pomegranate, etc., are now cut, and dipped in the mass just as far as to leave a little space clean, to hold the whip. They are then put to dry somewhat, and dipped a second and a third time in this matter, when they are supposed to have enough glue, or "aibbek," as the Arabs call it. They are now put together by dozens and sent to the market. Any bird-catcher or bee-keeper (I used them myself) now sets up those whips one by one in the branches of trees, or on poles or reeds put up in the vicinity of the hives. The bee-eater is known to perch up very high, and finds those green whips very inviting for him to perch upon, whereupon his feet stick fast to the substance, and very often making efforts with his wings to get off, he gets entangled more and more in the lofty but unhappy resting-place, which proves very often to be his last resting-place.

This is the way the mucilage is manufactured and employed. I lately met with a young American lady by the name of Miss Debora, which, in the original, signifies "bee." I asked her if she would like to be the queen of all my queens. The answer was in the positive. I don't think you find very often such *queens* set over so many queens.

By the time the present reaches you, or very soon after, I shall be back again to my Palestine apiaries, where I generally reside. What I mean by this is, you may kindly continue mailing the journals to Jerusalem, not heeding the date given.

PH. T. BALDENSPERGER.

Mt. Lebanon Apiary, Beyrout, July 23, 1883.

Friend B., we are very much obliged to you for the facts you give in regard to this strange tree, as well as for the very full explanation you give us in regard to the oriental plan for catching birds. It seems to me it is a vast improvement over the time-honored plan so often recommended to youthful aspirants, of putting salt on their tails. We are interested, too, in that American queen-bee. For a good while we have heard much about sending over to your country after queen-bees; but I believe you are almost the first one who has had the good sense to appreciate the rare excellences of the native American queens. May God's blessing rest with Mrs. Debora and yourself in your Palestine home.

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DO DRONES CONGREGATE IN LARGE BODIES, WHERE QUEENS MAY MEET THEM?

SOME IMPORTANT FACTS IN THE MATTER, FROM FRIEND DOOLITTLE.

MANY of our friends who have read GLEANINGS for years back will remember the articles on this subject, and I presume most of our readers are familiar with the fact given on page 65 of the A B C book, in regard to queen-ants meeting in vast bodies. Well, keeping these facts in view, we read with interest the following, which we extract from the *A. B. J.:*

> Some 20 years ago my father planted a piece of corn on a high hill; and as the season was quite wet during June and the fore part of July, the weeds were quite rank in the corn during the fore part of August. As soon as through haying, we went into this cornfield to cut the weeds. Every afternoon from about half-past twelve to three o'clock it would sound as if there was a swarm of bees in the air, and at first we looked often to see if we could not see a swarm; but as none was discovered, we concluded it must be flies of some kind, which congregated there to play. At this time there were no bees nearer than two miles from this hill, unless, perchance, a stray swarm might have been in a piece of woodland not as far off. Previous to this my father had kept bees, and had often pointed out the queen to me as a swarm was going into the hive when he hived them, and I knew a drone as well as a worker-bee.
>
> One day I was sent to the cornfield alone, and, as it was a very warm day, along about two o'clock I got extremely tired (or, perhaps, lazy), and so I lay down partially in the shade of the corn to rest. As I remained there, listening to the hum of the flies, as I supposed, I thought I would try to ascertain if I could see any thing; so, shading my eyes by placing one hand each side of them, and looking steadily up into the clear sky, after a little I could see thousands of living creatures circling in all directions, so swift that at times they looked like a streak of black,

shooting across the sky. As I was looking at them, I saw a dozen of these shooting objects give chase after another, and soon overtook it, when their flight was less rapid. Circling around, they came near the ground and stopped on the tassel of a stalk of corn, which stood about a rod from where I lay. I got up at once and proceeded to the stalk of corn, but before I was half way to it, one flew off, which looked to me like a queen honey-bee, and the other fell to the ground. Upon picking it up, I found it to be a dead drone. Although at that time I knew little of bee lore, still I had solved the mystery of the humming noise, no longer believing it to be flies which made the noise, but knowing it to be made by the drones of the honey-bee.

I now believe that this was a place where the drones and queens congregated, but the facts only show that drones are numerous which fly two miles from home, and from the next fact which I give, I believe that there were drones there from hives five or more miles away.

When I first kept bees there were no Italians nearer than five miles distant, yet occasionally I found that some of our young queens would produce "now and then" a yellow bee. My bees were all black when I bought them, and the Italians were introduced five miles away, after I had bought the blacks. The next season a man four miles distant Italianized his whole apiary, and the year following I found nearly one-third of my young queens producing from one-twelfth to one-third of their bees with yellow bands. Being pleased with the work done by these hybrid bees, I introduced the Italians into my apiary the next year, which, of course, put a stop to my observations, as to the distance queens will mate.

From the above facts I am positive that queens of one race will mate with the drones of other races of bees, unless such are kept more than five miles apart.

THE CHICAGO CONVENTION.

SOMETHING FROM SECRETARY HUTCHINSON.

ALTHOUGH it is, perhaps, a little late to say any thing about the Chicago Convention, yet there are probably many of the readers of GLEANINGS who have seen no report of the proceedings, and to such the following may prove interesting.

WHAT KIND OF BEES ARE BEST?

Some favored pure Italians, but scarcely any one wanted pure Syrians, and no one wished for pure blacks. A cross between the Syrians and Italians, and between the Italians and blacks, both found their advocates. There seemed to be decided preference for "crosses;" even Mr. Langstroth declared himself in favor of a cross.

LEGISLATION ON FOUL BROOD.

The opinion prevailed, that there was plenty of legislation now upon the subject; it only needed enforcing.

SUPERSEDING QUEENS.

It was decided, that queens are not always superseded because they do not lay a sufficient number of eggs, but from some signs of decrepitude discernible to the bees but not to ourselves. A superseding queen is always an excellent one. Italians supersede their queens more promptly than do the blacks.

MARKETING HONEY.

Mr. R. A. Burnett, a dealer, gave some excellent advice in regard to marketing honey. He said that one-pound sections are the best; that if half-pound sections must be sold at a very *great* advance in price, he did not think it would be advisable to use them; that *glassed* sections are very unsalable; that sections a trifle under weight are better than those that overrun; that a thin comb is more salable than a thick one weighing the same; and that dark honey is more salable in the extracted form.

ADULTERATION OF HONEY.

Some thought that honey could be adulterated at a profit, by the producer; others thought not; but all were opposed to it.

OVERSTOCKING A LOCALITY.

Upon this subject there was much discussion, with no very definite conclusions; but the idea seemed to prevail, that not more than 125 or 150 colonies should be kept in one locality, and the field should be clear for three miles in every direction. No one could be certain that his income had been increased by planting for honey alone.

SURPLUS RECEPTACLES.

Upon this subject but little was said; section boxes, of course, being given the preference, those with open top-bars being the favorites. Three-fourths of the members could obtain straight combs without separators. Sections two inches wide had but few admirers; 1½ to 1¾ inches were considered of a better width.

Mr. Langstroth gave a long and interesting account of how the invention of the movable-comb hive was brought about, and then spoke with much feeling of

THE HONORED DEAD,

Mentioning Samuel Wagner, Moses Quinby, Adam Grimm, Richard Colvin, and R. C. Otis. When Geo. Grimm arose and thanked Mr. Langstroth for the eloquent words spoken of his father, it touched a sympathetic chord, and brought tears to many eyes.

WINTERING.

Upon this subject there was the usual talk about packing, cellar wintering, pollen, dysentery, etc. The feeding of cane sugar for winter stores was strongly recommended.

COMB FOUNDATION.

The preference was decidedly in favor of the Given; and for fastening it into sections, the putty-knife plan, the melted-wax plan, the Parker fastener, and the Clark, were all recommended with a vehemence that was bewildering.

PURIFYING WAX.

Melt it with large quantities of water; let it cool slowly while upon the water, and all the impurites will settle to the bottom.

AFTER-SWARMING

Came in for its share of discussion. Some would prevent it altogether; others not, while methods of managing after-swarms were given without end.

The Rev. L. L. Langstroth told how Mr. D. A. Jones managed

ROBBER BEES,

By putting dry hay in front of the hive attacked, and then covering it with *wet* hay. When a bee is wet, there is not much fight left in him. Mr. Langstroth had united colonies, even when they were disposed to quarrel, by wetting the bees in one hive, and shaking the bees from the other in front of it.

Perhaps the greatest treat to all who attended the convention was that of meeting Father Langstroth. Mrs. L. Harrison was so overcome with enthusiasm that, when introduced, she put her arms right around his neck, and kisssed him, while those who saw the act cheered and applauded to the echo. Mr. Langstroth and myself were the guests of Mr. Newman, and it was my good fortune that we shared the same room. Never shall I forget those long, interesting, and *good* talks that we had. When Mr. Langstroth invented the movable-frame hive, he fondly hoped that it would revive bee-keeping among the masses; but it had an opposite effect. It placed

BEE-KEEPING IN THE HANDS OF SPECIALISTS,

And Mr. Langstroth has given up all hopes that the masses will ever keep bees, unless it is upon some different system from that which we now have.

W. Z. HUTCHINSON, *Sec.*

Rogersville, Mich., Nov. 16, 1883.

Friend H., you deserve a medal for having inaugurated a plan for reporting conventions so as to boil it all down into less than a page. It is seldom that we have room for a full report in GLEANINGS; but we always have room for such a report as you give. Very likely it is open to criticism; and perhaps you have omitted many important things; but for all that, it is a move in the right direction.—I do not quite get your concluding thought, however. It seems to me that the masses do keep bees, and get honey and happiness both. Any one who doubts it should read our reports from A B C scholars.

ARE THEY ITALIANS OR NOT?

AND ARE BANDS A TEST OF PURITY?

ARE my so-called Italian bees Italians or not? Now, don't every one of you professors of apiculture pipe in at once and say, "Why, it is easy enough to tell; the Italians have three golden yellow bands on their abdomen." Yes, I know that that is what the books teach, and I believe that bee-connoisseurs pretty much agree upon that point. But it seems very strange, that, starting out as I did last spring, with 2 colonies of Italians and 15 of blacks, that 11 out of the first 12 queens reared from my tested ones should turn out to be purely mated. When the progeny of the first-hatched queens made their appearance I was tickled to see those three golden bands glisten in the sunshine. But as, one after another, they all showed these same marks, it all began to look a little too thick. One out of the 12 did not show the yellow marks so distinctly, although, learning from Root's primer, as I did, I scarcely needed that, from the way they usually greeted me when opening the hive, to convince me that they were hybrids. And I might say here, that often this autumn I have felt profound convictions that most of the other 11 were hybrids. But last August I was puzzled. Were they all Italians or all hybrids? for, including my imported ones, they all looked alike to me. Or did I not have sense enough to perceive the difference, if difference there were?

After watching, wondering, and worrying for several weeks (I have not got over all that yet), I called upon an old retired apiarist, Miles H. Wilmot, J. P., well known to many of our western bee-keepers, hoping he might furnish me with some solution to the enigma.

WHAT MR. WILMOT THOUGHT.

He said that the three golden bands were regarded as a test of pure Italian blood. In his judgment, however, there were two such necessary tests, the yellow bands and gentleness. He had had Italians which he could shake or brush off the combs in the roughest manner; indeed, he could handle them just about as he pleased. Others, to all appearance beautiful Italians, were of the most rabid kind. All such he regarded as hybrids. He also believed that the majority of queen-rearers were arrant humbugs. What do you all think about that?

Now, I have always understood that all Italians were gentle and quiet. Those I bought of E. T. Flanagan, of Belleville, Illinois, do usually remain quietly on the combs. But so persistently do they stick, that any effort to brush them off rouses their ire, and they stick it to me; it is then I get the benefit of their feelers; and especially will they fight the poor brush with all the choler of which bees are capable. And often one will pop out of the hive into my eye, for no apparent cause, and go to work as if *she* would gouge it out. That in the honey season too. Those I have raised myself are more excitable, though quiet at times; but when full, or lengthened out, the bothersome third stripe is always there. What about all this? Are the marks described, certain tests of purity, or is 'Squire Wilmot right? Can we be certain that gentleness is a characteristic of all Italian bees? Of course, if thrift and profit alone are to be considered, it makes comparatively little difference as to what blood they are. But when I sell bees I want to know whether I can warrant them to be pure Italians or not; therefore I want queens and drones of either race to be thorough bred stock.

SOME OTHER MATTERS BEARING ON THIS SUBJECT.

I have among my old stocks four colonies which plainly display two yellow bands. They are among my gentlest and best workers. The two I had this spring swarmed naturally, and raised immense crops of drones. May not my Italian queens have mated with these two-banded drones, and produced three-banded workers? May not that often be the case in the apiaries of queen-rearers? Also, I find among my old races yellow-banded and yellow-spotted bees of every degree, and bees without any yellow, and all these diversities in the same hive. May it not be, that in mixed breeds of bees, as well as of other live stock, the offspring of a single queen will vary in their markings and disposition as well? Finally, it is a curious fact that all my young queens, two-banded and no-banded, appears to be purely mated; for every colony seems to be of the same race as its mother-bee. Is it possible that bees do take after their mother more than their father? Now, I do not know whether all this adds either to a solution or complication of my problem. It may not bother anybody else; but to me it all seems enigmatical and *funny.*

CAN INVALIDS KEEP BEES?

Friend Hasty and others have had their say upon that point; now let me have mine. The thought that invalids can not follow the business, needs qualification. I certainly would not advise every chronic invalid to go to bee-keeping. The class of persons, possibly, to whom the term is applied, would hardly be able to stand every pull the business requires. Still there are many persons, far from able-bodied and healthy, who can do well at it when there is not much else they can do. I, if you please, am just such a weakling. Raised on a farm, I have yet done but little farm work, except to feed pigs and chickens, drop corn, etc. — little country lasses' work. I could not stand it to be cooped up in an office. To find an independent living has been a tussle. In such a condition, I was fairly driven to take hold of this business, with a very small start, and I have made it the greatest success of my life. Not, it is true, such a success as it might have been if I could put my shoulder to every burden. If the skeptical reader of this could be myself during my puny spell in the summer, I think he would be convinced that *pretty near* an invalid can follow the business successfully. Still, I believe it does require considerable "*grit.*" I say this for the benefit of such as I, who may read this paper.

[*To be Continued.*]

Friend X., you will notice that Doolittle, in his article in this number, strikes on the same point you mention, but he thinks that Italians came from quite a distance, and fertilized his first young queens, so that they were really pure. It seems to me you are laying more stress on the importance of theoretical purity than the case demands. I have before said, that I knew of no way to get pure Italians, except they come from Italy, and we do import queens every season, as you well know. Well, now, there are those who say that even these are not pure; and my reply would be, that, as long as they furnish the honey, I do not care particularly whether they are pure or not. Perhaps we had better drop the word " purity " entirely, and guarantee all queens to produce three-banded bees. Where we send out select tested queens, as they have been termed, we can guarantee them to produce three-banded bees, and of general gentle behavior. The progeny of the queens direct from Italy are, as a rule, gentle. But a colony of bees that have been for years gentle and quiet may get aroused and stirred up so as to be perfect tigers; and therefore we have to bear in mind that three-banded bees are sometimes gentle, and sometimes not; and again, the same colony of bees is sometimes gentle and sometimes not.

In regard to three-banded bees: People differ here. I have never found any worker bees from queens imported direct from Italy that did not show evidences, satisfactory to myself, of the three bands; but others pronounce these evidences insufficient. Remember, I do not say *yellow* bands, for they are not always yellow. If you turn to the proper place in the A B C book, I think you will find the matter defined sufficiently.

Now, there is one thing in your letter that seems to me is of more importance than yellow bands. Your friend, 'Squire W., believes the majority of queen-breeders to be humbugs. Do you not think that speech comes pretty near to the class of people who sneeringly declare that the world, as a whole, are humbugs, and who say, and seem to enjoy saying, there are no such things as honest men? Has 'Squire W. abandoned bee-keeping, because of the dishonesty he alludes to? If so, the deduction would be, he is good while the rest are bad. Friend X., what do we usually think of people who speak and talk in that way? does true nobility, and uprightness of soul, ever take upon itself this phase? When I first became acquainted with Prof. Cook I was at once struck with his wonderful charity for the world at large. He evidently sees the faults of humanity, but he also sees, in a most unusual way, the good qualities. He not only speaks well *of* everybody, but he speaks well *to* everybody, and almost everybody he meets receives an impetus to do better, from having once known him. Almost the first day I ever saw him, he reproved me with considerable energy, for speaking harshly of a certain class of people, much in the same way as 'Squire W. spoke of the queen-rearers. It made such an impression on me that I have never forgotten it, and I do not believe I have ever called *any* certain class of people humbugs since then. Charity " rejoiceth not in iniquity," but in truth; * * * * * * " thinketh no evil."

QUEENS ACROSS THE ATLANTIC BY MAIL.

FRIEND BENTON A LITTLE AHEAD OF FRIEND DOOLITTLE, AFTER ALL.

"YOU have done it, my friend! You have done it! * * * * * *probably the first live bee that ever crossed the Atlantic in the mails*," is what G. M. Doolittle, in Oct. GLEANINGS, quotes Angus Cameron as having written to him.

Let us see. Mr. Doolittle says in the same communication, that he mailed his queen Aug. 2d, and received Sept. 4th word (under date of Aug. 18th) of her safe arrival. The following is verbatim from a letter addressed to me, and now in my possession. Notice the date.

BEETON, July 5, 1883.

MR. FRANK BENTON, MUNICH, GERMANY:—

Dear Sir: We received a queen from you in a mailing-cage. Most of the bees were dead. I think there must have been at least double as many bees as could get food and water. The live ones were in fine condition. The water was not all used, and not more than about a seventh of the sugar. so you see there must have been only a few bees the greater part of the journey. I think from 12 to 20 bees would have been ample. Too many bees are worse than not having enough. * * * * * I have instructed the boys to send you a cage of bees, and you can report. I can send you some more styles of cages to test. to find out which goes best, as one trial is not sufficient to decide the matter.

With kind regards to Mrs. Benton and yourself, yours very truly,— D. A. JONES.

The queen above referred to was an imported Syrian, mailed from Munich during the mouth of June. She had previously stood a long journey *by mail*, having been prepared according to my instructions in Beyrout, Syria, and had come via Alexandria and Trieste to Munich — a journey which takes 11 to 12 days, the distance being about 2500 miles, part of which is in a sub-tropical climate, and thus particularly trying to the bees. About 30 workers accompanied the queen, and the food was pure sugar candy. The water was in a tin bottle, with a pin-hole made in the middle of solder, to prevent its closing with rust. The form of cage was the same as that I used in 1880, and which was illustrated in the *British Bee Journal* for July, 1880, and of which Mr. Doolittle's cage is nothing more nor less than a copy.

Thus the *first* queen, which, so far as I am aware, ever crossed the Atlantic alive by mail, did *not* come from America to the Old World, but went from this side the water westward. Moreover, this majestic Syrian beauty went all the way from her native land to the New World by mail. A second queen, this time a Carniolan, was mailed to the same address on the 27th of July, thus six days before Mr. Doolittle started his queen. Mr. Jones has failed to state how this and several others sent by mail since that date got through. I have, among my letters on this subject, one from John Hewitt, Esq., Sheffield, England, dated Aug. 7, 1883, in which is the following sentence: "I am glad to hear you have succeeded in landing queens alive by post in America. You deserve to succeed, after so much trouble and expense."

The first queen-bee I attempted to send by mail on such a long sea-voyage went from Cyprus to London (nearly 3000 miles) in June, 1880; and by reference to the *British Bee Journal* for July of that year there will be found, as above stated, an illustration of the cage then used, and a report by Mr. C. N. Abbott, the editor, to whom the box was addressed. He wrote: "Although buried in the hold of the ship for ten days, under tons of mail matter, the queen and her retinue arrived at our office as fresh and lively as might be wished, but one worker being dead, and not a speck in the box to suggest dysentery or disease." The same season I sent queens by mail from Cyprus to Germany, which takes even longer. During 1881, further experiments were tried, also with good success. Again in 1882, from Beyrout, Syria, larger numbers of queens were sent to various countries of Europe, and the success of sending by mail on such long sea-voyages further demonstrated. No other person has aided me so much in determining the conditions necessary to success, the exact causes in the case of failure, etc., nor given me as many valuable suggestions in regard to this matter, as the Sheffield gentleman whose name I have already mentioned, Mr. John Hewitt. Had others given as prompt, exact, and full reports regarding queens mailed to them, I would have been much less time determining upon the best method of packing. In reporting in regard to a certain queen I sent him by mail from Beyrout to Sheffield he said: "When I opened the box the queen and most of the workers took wing, and the former circled about fully five minutes before resting. I do not partake of your fears, that queens will be injured by such long confinement on a journey by post." At that date I even began to believe I could send them *by mail* from Beyrout to America, with no interruption on the way. In this opinion I was encouraged by Mr. Alfred Neighbour, of London, who had already received a large number by mail from me. Accordingly a number of packets were mailed by French post in Beyrout, marked "Via Havre." I hoped they would escape touching England. But every one of these experimental packets was unfortunately sent to England (with some forty others which were addressed to Mr. Neighbour), and thence *returned to me in Beyrout.* It seemed strange to me, considering that, in some respects, the journey from Syria to England is a more difficult one than that across the Atlantic, no one in America seemed to think the latter could be accomplished. I am well aware the plan has been mentioned in the bee-journals on several different occasions—that both Mr. A. I. Root and Mr. A. J. King have come forward in their respective bee-journals with a plan each, whereby they felt almost sure of getting queens across the Atlantic by mail in safety. But what's the reason we have never heard further, so much even as a report of an actual trial of their proposed plans? I have had queens that were 18 days, and even 19 days, by mail from Syria arrive *in fine order!* If, after working hard for more than three years on this problem—trying to determine upon those conditions which would give the smallest percentage of losses in sending by mail on long sea-voyages, I have succeeded thus well, I beg leave modestly to agree with friend Hewitt, "*that I deserve success.*"

This year the first queen which I tried to get across the Atlantic by mail was sent to Mr. A. J. King, N. Y. City, on the 31st of May; a second followed June 6th, and a third one was sent June 9th, all imported Carniolans. Mr. King reported these bees all dead, but failed to explain satisfactorily the cause. He also wrote: "I don't think you can make a success of mailing queens from there." But I had no notion of being so easily persuaded into giving up the plan. I had hitherto used a simple strip of wood containing three holes opening into each other. In one end candy was placed, while the opposite end held a water-bottle, and the bees were in the middle space, a few air-holes having been made in the sides. In 1880 I used glass water-bottles with a wick; afterward I substituted tin bottles with a pin-hole; then at the suggestion of Mr. Hewett, of Sheffield, I coated the pin-holes with solder to prevent their closing with rust. Wire cloth and a card confined the bees and covered them from view. Sugar made into white candy was the food I used. For a time I tried cream of tartar to keep it from graining, but found this very detrimental. The sugar, if pure and properly "sugared off," becomes a soft candy, upon which the bees can ordinarily subsist for some time without water. In August the idea came to me of putting the food, to keep it soft and moist, into small tin boxes closed at the ends, and furnished with small openings on the sides, and cages to hold two such food-bottles as well as two water-bottles were constructed in accordance with a model, nearly square in form, furnished by Mr. Hewitt, and in this cage I have succeeded in sending by mail a considerable number of queens alive to America. A few weeks later, however, I perfected a cage in the form of that I first used in Cyprus and Syria, which, with two excellent points suggested by my ingenious English friend, Mr. Hewitt, I pronounce far ahead of any of my former efforts. I mailed to this gentleman in one of the newest cages a young Cyprian queen raised in my apiary here, and received from him a letter, from which the following is an extract: "The Cyprian queen came safe to hand on the 24th. I must congratulate you on the improved cage. I consider it far better than my square one. It seems to answer every purpose, and I have nothing but admiration for it." Having some fifty of the square cages—the Hewitt form—on hand, I concluded to use those up before having a great number of the later pattern made, and it may be of interest to hear some of the reports from them. I select the following:

Decatur, Ill., Aug. 27.

Dear Sir:—One queen reached me to-day in most excellent order. I am quite sure that one bottle of water and sugar would be enough. There was but one dead bee in the cage. The others were as lively as though just taken from the hive. I hope the others will come soon and in as good condition.

E. A. Gastman.

This queen, an Italian, was mailed here Aug. 13th. One mailed on the same day to Pennsylvania, brought the following:

Coatesville, Pa., Aug. 28, 1883.

One cage arrived yesterday, "Italian No. 3." Bees all alive but *one worker*, and in good condition. Afternoon mail, "No. 2" arrived. Bees all dead but one worker. Both cages and supplies in good condition. No. 1 came via Havre, other two via Bremen. Looking for others by every mail. Geo. H. Rees.

No. 2 above referred to was mailed on the 10th of August, three days before No. 3.

Mazeppa, Minn., Sept. 21.

The Italian queen you sent by mail Sept. 3d came to hand Sept. 18th, all right; 14 or 15 live bees in the cage with her. Hope you will have as good success in sending the other. Will probably want a number in the spring. BRIGHT BROS.

From a queen mailed Sept. 17th comes back to the "old country" the following cheery greeting:

EAST BETHANY, Genesee Co., N. Y., Oct. 2, 1883.

The Carniolan queen came to hand in fine condition. The Italian has not arrived.

ROBERT GUYMER.

Many more letters might be given, some telling of dead queens, some of live ones. But suffice it to say, that on the whole the results are satisfactory to me. Though I have sacrificed quite a number of queenly beauties, still some vantage-ground has thereby been gained, and the sending of queens across the Atlantic by mail can now be pronounced a success.

Those queens sent were each accompanied by 28 to 35 workers, experience having long ago shown me that the suggestion of Mr. Jones, to put in but 12 to 20, while answering very well for short journeys, is not so good for long ones. This fact has been known to me fully *ten* years.

"Honey in a sponge" is suggested by friends King, of N. Y. City, and Henderson, of Tennessee. I employed that method as early as 1874, *waxing* also the cavities which held the sponges. It works very well for short journeys, but I would not want to trust many queens that way on long ones. Mr. Jones tells me "just how to do it." But his bees and styles of cages do not come to hand — not even word how the queen put up according to a plan he suggested (mailed Aug. 15) arrived, nor, for that matter, how any of those mailed since the first one in June have arrived.

The whole thing seems just as easy as "rolling off from a log;" but, "the proof of the pudding is in the eating;" and, instead of telling their *plans*, just let us see some of "the boys" put 'em in practice. If they don't make a better showing than the above, then the undersigned, having told them "how he did it" in June, 1883, will tell them how he proposes to do it in 1884. FRANK BENTON.

Munich, Germany, Oct. 22, 1883.

The above article unravels several things that had been a little mysterious before to myself and others. When you sent your advertisement for the July No., I confess I was a little troubled to see how you were going to get queens singly from Germany to New York City free, at $4.00 each. As soon as the advertisement came out I was asked what it meant; and as no explanation had come from you, I was obliged to confess that I could not explain it. When in Toronto I asked D. A. Jones how it was done, and his reply was any thing but satisfactory. It never once occurred to me that the queens were to be sent by mail. Well, now, away along here in November it transpires that you sent an article, to be inserted simultaneously with the advertisement. This article would have been most extremely welcome just at this time. The question has been asked, why I have not tried sending queens across the ocean. Well, I have tried it a little; but as I attempted to send them to Italy, it is not strange that I failed. Of late years I have had so much on my hands all the while that must be done in order to keep my reputation good, that almost all else has been from necessity allowed to go. I have long wished I could come across somebody who had the necessary qualifications—that is, who would enter into the spirit of the work, heart and soul, in order to perfect, by experiments, a cage that would go safely across the Atlantic. I am rejoiced to hear, friend Benton, that you have been doing this very thing, and have succeeded. I confess that my faith, like that of the editors of the *Bee-Keepers' Magazine*, was rather small in the matter until friend Doolittle announced his success. There is one point here that needs consideration. Doolittle succeeded without the use of water; and, if I am correct, you used water in all your cages. The question now comes up, as to whether it shall be water or no water. During the past season we have experimented considerably in this matter; and while the bees came through without water, it is pretty well settled that, as a general thing, those having water-bottles seem to be freshest and brightest. On one occasion we sent three cages with water-bottles, and three without, to a distant customer. While all came through alive, those with water were in much the best condition. Yet, taking it altogether, we have had less trouble with the Good candy and no water.

HOW BEE-KEEPING MAY BE MADE MOST PROFITABLE.

COMB HONEY IN GLASS JARS SURROUNDED WITH LIQUID HONEY.

PERHAPS I am not far out of the way when I say that three-fourths of those engaged in apiculture, or making this branch of industry a leading feature of their business, are persons of limited capital. It is also true, that a large minority so engaged have chosen this occupation because they are physically incapacitated for the pursuit of laborious callings. Another class embark in the business from the impression that the bee-master's life is fraught with ease and comfort, requiring but little attention, and less labor — two things for which their attachment at best was never strong. The last-named class are like many artificially reared queens — short-lived. They have consumed an insufficient amount of royal jelly for their perfect development.

The second class, when fairly into the business, discover that they have an elephant on their hands, much larger than they ever expected. The first class alluded to, that have chosen the occupation because their insufficient capital will not warrant the undertaking of a more extensive business, find, in many instances, after a long uneventful struggle, and years of repeated disappointment, to have come out about the same place they started — at the little end of the horn. They now discover for the first time that they have "mistaken their calling;" and with disgust and contempt for the business, step down and out, but just as surely into something else, to make a repetition of their first failure. In this we find a class of ignominious failures all through life.

When we scrutinize carefully the manner of conducting their affairs with that thriftless, shiftless, badly managed course, there need be no surprise at their inevitable failures. It is one thing to produce an article for sale, and another thing to exercise judgment and skill in disposing of the article to the best interest of the producer. As much depends on the disposal of a product as does on its production. I now come to that point which most interests the bee-keeper; viz., how he may realize the most money for his particular production. It shall be my aim in this article to aid my fellow bee-keepers to dispose of their product to the best advantage. I never sell a pound of honey for less than 20 to 25 c. Not only do I sell all my own honey at these figures, but thousands of pounds purchased from other bee-keepers and commission men dealing in honey.

To those of my readers who have been shipping their honey to commission merchants, taking their prices, and not yours, and making fortunes by standing between the producer and consumer, I ask you why you do not make an effort to sell that nice honey in your own home markets. If you have not much of a market, go to work by your skill and indefatigable efforts, and create a home market, you will not fail. You can do it; how? Why, I'll tell you. The world is taken (in this age) by show; and the sooner this is learned, the better for every one, and especially for the bee-keeper. He has an article that is in itself attractive and showy. It came from the Creator's most beautiful and showy creation, the bloom and the flowers; and why should we not continue to display its attractiveness until we have realized its actual value?

When I say the world is taken by show, I mean that an article exposed for sale, to meet with public approval, must look well, or be presented in the best and most attractive and convenient shape. I will relate a little of my own experience in selling honey, which will at once bring out the point I wish you to see.

Some years ago I was tempted by a low price to buy a quantity of honey built in large rough boxes, holding 10 to 20 lbs., which was of nice texture, and ought to have sold readily. I left this honey with retailers to sell for me at 15 cts.; and when sold, they might pay me 12½ cts. for it. Weeks and months passed, and but little was sold. I did not like to lose on the investment, so I set about to devise a plan to make it go, or lose still more. A few grosses of half-pound honey-tumblers were bought; the honey brought home, cut out, and a nice little piece dropped into each tumbler, and the chinks filled up with well-ripened, extracted honey. The cap was so put on as to secure all, and a neat showy label put on, filled in crates, and put on the market. It is needless to say, that this honey went, and went, too, like "wild fire," at 25 cts. per lb. The demand soon got away ahead of the supply. I could scarcely get enough to keep the retailers going for a long time, until I got help in putting up. I have extended my trade in honey in this style of package to all the towns and cities within convenient reach of me; and I will say to you, that, in spite of all I can do, when I come around delivering I find many out, saying, "Why, I could have sold many more; I have been waiting for you."

Now, my friends, I have made some money, and you can do the same. Let your honey be put on the market in small neat packages, and displayed to the best advantage, and it will sell itself for all it is worth. JOHN A. BUCHANAN.

Holliday's Cove, W. Va., Nov. 23, 1883.

Friend B., your suggestion is a grand good one, even if it is not entirely new. Some years ago we started quite a trade in our town by putting chunk honey in Mason jars, and filling around with liquid, as you do. All went nicely until cold weather, and the honey candied all around the comb. This finished up the trade; and we attempted to heat the liquid honey enough to enable us to seal it up to prevent candying; but we got it a little too hot, and the comb was melted, and we gave up the business. It has just occurred to me, that the little glass pails we sell would be much nicer than the half-pound jelly-tumblers. They are made of flint glass, and the bail gives a remarkably neat and handy appearance to the whole outfit.

THE MYSTERIES OF BEE-KEEPING EXPOSED.

SOME IMPORTANT FACTS FROM A FRIEND WHO LIVES A GREAT WAY OFF.

IN reply to D. McKenzie (p. 538), I would premise by stating that my experience with bees commenced in 1835, and the "mysteries" were hidden in a *box* till Mr. Langstroth introduced movable frames, which allowed us an occasional opportunity of observing some of the habits of the little "insex;" but now the use of an observatory-hive gives us an insight into all the mysteries of ancient and modern bee-keeping.

I now form nuclei in observatory-hives with two regular Simplicity frames, partly filled with brood and honey, with all the bees that may adhere to them. If the old queen be among them, she will continue laying; if not, the bees may be expected to rear a queen.

EGGS MISSING.

But, just here comes one of the mysteries referred to (as taken from my note-book: Oct. 1. Formed the usual nucleus. Oct. 8. There being no sign of either queen or queen-cell, I gave them a few eggs and larvæ, which they immediately destroyed. I saw the bees enter the cells containing eggs; and when they withdrew, the eggs had disappeared. I did not dissect the bees for ocular proof that they had eaten the eggs, but *jumped* at that conclusion.

BEES EATING LARVÆ.

I saw the bees draw the larvæ from the cells, crush them with their jaws, partly suck them, when the larvæ would be seized by other bees, and not be dropped till the skin was empty. I gave them young brood again on the 13th, with the same result. On the 15th they commenced two queen-cells, which were abandoned on the 17th, when I found about 200 eggs compactly laid in each side of the brood-comb; some cells had two, and a few three eggs in them. In due time, about one-half of the cells were enlarged in diameter as they were built out, and capped as drone-cells, the intervening larvæ being destroyed. I presume it is a case of fertile worker; but as there are no drones at present in my apiary, I intend to let them hatch, and then return the nucleus to the parent hive.

SMALL QUEENS OR LARGE WORKERS — WHICH?

My bees are common blacks; some of the old workers are ¾ of an inch long; and as their wings do not cover the two last segments of their abdomen, I can not easily distinguish the queen, even when placed beside them. This fact annoys me so frequently that I have sent to California for some Italians.

DHOURRA, OR EGYPTIAN CORN.

In reply to your query concerning Egyptian corn (page 542), I would say that it is on record that Jacob sent certain of his sons down into Egypt to buy some corn, during a drought in Canaan. Dhourra is a species of millet, indigenous to Africa, and sorgho is a kindred species indigenous to Asia. The seeds, or grains, of the two species are much alike; but, one variety of the dhourra is white, and may be easily crushed with a rolling-pin, or in a small coffee-mill. In the vernacular of the American citizen of African descent, it makes "very nice hoe-cakes."

A GOOD FORAGE PLANT.

I have counted 1200 grains in one head of dhourra; and as the stalk is soft, like that of sweet corn, I think it would be a desirable forage plant for cultivation in many localities.

A ROACH-TRAP WANTED.

Besides the usual vermin, such as birds, rats, mice, etc., I am annoyed by roaches, sometimes finding four or five in a hive. I have placed slides over the entrances to the hives, perforated with ¼-inch holes; still they enter when small, and soon become too fat to come out. I do not know that they eat any thing besides honey; yet in the hives mostly infested by them I have recently lost several queens. I have tried various forms of covered traps, but have caught more bees than roaches.

The ants (black and red-winged and wingless) are also troublesome. In one case they actually carried the comb away from the hive faster than the bees could build it. The bees finally became discouraged, and emigrated, joining another colony. To avoid this pest I place four hives (facing alternately east and west) on a platform about 8 feet long, supported about 18 inches from the ground by two posts. A string, saturated in a solution of corrosive sublimate, is wound around each post.

T. WALDRON BARTHOLF.

Honolulu, Hawaiian Islands, Oct. 29, 1883.

Thank you, friend B., for your positive proof that bees do eat eggs and larvæ. I have often noticed their disappearance, and I have sometimes seen them suck up the juices of larvæ where the combs had been cut or mutilated.—I believe that dhourra, or Egyptian corn, has been tested in our own country, although I can not say what the result has been. We are glad to hear of bee culture in your far-away island; and even though you have enemies to contend with that we never hear of, it does us good to know about these things. You do not tell us much about the honey you get. Does your locality equal friend Osburn's description of Cuba in this same number?

"Remindery,"

Or Department for duties to be attended to this month.

I WRITE you in regard to my bees. I have some nuclei that will have to be fed. Now, I want to know what kind of food is best, and how to prepare it for use, and the best way to feed it, as I never tried it. You can just publish in GLEANINGS, if you choose.

J. H. CUTSHAWL.

Greeneville, Tenn., Nov. 19, 1883.

Friend C., it seems to me it is rather late in the day to talk about fixing bees for winter—19th of November; however, as there are always some who have to feed late, it may be well to consider the best way of doing it. Your expression, "Just publish it in GLEANINGS," sounds almost like a joke, since I have been giving directions for feeding, in almost every number for three months past. If you have very nice fine weather, so pleasant that the bees will fly, even when it is cloudy, I presume you can safely give liquid food, even in December; but such days do not often happen in our locality. If you do feed liquid food, do it carefully, and take away the feeder, and cover the cluster up well just as it was, before the weather turns cold. Now, then, we are to face the matter of bees that are short of stores during freezing weather. What shall we do? We have had very good success with powdered loaf sugar, kneaded up with honey. But others say it does not work so well with them. The fine sugar rattles down to the bottom of the hive. Perhaps the old way of feeding candy will be the safest. Make it according to directions given so many times, and always found in the A B C book, and then lay lumps of it on top of the frames, right over the cluster. These lumps should not be larger than hickory-nuts or walnuts; and when they get them warmed up and eaten up, give them some more, always covering the candy with a burlap sheet or chaff cushions. You can open the hive to put in more candy almost any day in the year, if you are careful to close it up quickly. I would use only the best granulated sugar for making the candy. I have wintered bees in this way where the colony had less than one pound of honey, and they came out strong and healthy in the spring. If any of the friends find it too much bother to make the candy, we can furnish it at 15 cts. per lb. Of course, it can not profitably be sent by mail; and for that matter, if the distance is great it is pretty expensive sending it by freight. Then another trouble comes in: These friends who are late about their feeding are almost always behind, and must have it by express, and the express charges sometimes cost them more than the candy does. Candy can be sent by freight; and as all kinds of sugar are usually sent so, it will not be very expensive food. Or you can buy the sugar at the grocer's, and make it yourself; or, better still, get your wife to do it, if she is good-natured, and has not too many household cares. Seems to me it would be a good thing for some supply dealer (at least one of whom should be found in every locality) to keep this bee-candy in stock. This would save enormous freights, and might save the lives of many bees, if their owner knew just where he might get the candy at a small price. The candy of the groceries will do, but it is not as good as that made expressly for the bees; and another thing, it usually costs too much. The best success I have ever had in feeding candy was with dry hard candy that was not stirred at all, and the fragments of it, when broken, looked like blocks of ice, or greenish-colored glass. Bees would cluster on this, and lick it all up. They wintered outdoors with the ordinary chaff coverings. Our bees this winter do not require candy or syrup either, for they have plenty of natural stores gathered from basswood and clover.

Heads of Grain,
From Different Fields.

THE CLIMATE OF CANADA.

THERE seems to be an opinion among most people in the U. S., that the whole of Canada has an arctic climate. A writer in a late number of Harper's *Magazine*, in describing the climate, customs of the people, etc., of the village of St. Pauls, on the north bank of the St. Lawrence River, below the city of Quebec, conveyes the impression that it is a type of Canada in general; it would be quite as sensible to go to Northern Maine to ascertain the climate of the U. S. The fact is, that the average temperature of the greater part of the Province of Ontario is as high as it is in half of the territory of the U. S. east of the Rocky Mountains. South-western Ontario has a much milder winter temperature than Southern New York and Northern Pennsylvania, while the mean annual temperature of the western peninsula of Ontario is about the same as that of Kansas and Missouri.

On Sunday and Monday, Nov. 4th and 5th, the bees were gathering honey from sweet clover and mignonnette, and the air was filled with the perfume of the flowers. Butterflies were also sporting as in midsummer; and to-day, Nov. 8th, the bees were busy bringing in pollen.

I weighed 50 hives to-day that I intend to put into the cellar. I have been guessing at weights long enough — too long for profit. You may hear more about it in the spring.

P. S.—Nov. 9.— The bees are working on sweet clover again to-day. Temperature in shade, 56°.

Niagara, Ont., Can., Nov. 8, 1883. **GEO. CORK.**

MORE ABOUT DRONES BUILDING COMB.

You made me say that drones build comb (see p. 581). I did not say that. Now, please look at my letter of Oct. 8 and see what I did say. I suppose I had it bad enough, and you made it worse. This was what I said, or intended to say. If drones don't build comb, I am satisfied that they help. I will tell what I saw, and let it drop for awhile. I noticed some of the worker bees putting their heads and shoulders in the cells that were nearly full of honey. They would put their heads in and take them out, and pass to the next cell, leaving their heads in the cell about a second, and then pass to another cell. I saw one bee go to 150 cells, and never stop. I got tired watching him. This work they were at every time I looked at them. I spent a part of three days.

Now I will leave it to some one to say what these bees were doing. They could not have been taking the honey from one cell to the other for the purpose of ripening it, for they took their heads out too quickly. From what I could see with the magnifying-glass, they were drawing the cells. I could see the edges of the cells spring every time the bee would insert his head. You may think this does not have any thing to do with drones building comb; but whatever those bees were doing in that honey-box, the same thing the drones were doing in the box that had the drone comb in. Now if you will tell me what those bees were doing, you will oblige a novice. I did not intend to say, that the bees carried their wax on their legs, or get it in the field. The letter explains itself, and this was what I was at: That the comb-builders don't secrete the wax, but they get the wax from the seemingly idle bees in the box. I will excuse you; but please be more careful. This is your advice always, and you ought to heed it yourself. I know you will. **WM. MALONE.**

Oakley, Ia., Nov. 12, 1883.

Friend M., it seems to me you intimate that drones build combs, even if you do not say so. Now, I have seen bees put their heads in the cells in just the way you describe; but while I am not sure what they did it for, I can hardly accept your idea that they do it to stretch the cells. My impression was, that they drew out the thin honey, and by some process, either known or unknown to themselves, extracted a part of the water it contained, and then put it back. To confess the truth, we are all a good deal in the dark in this matter. I am glad you had the perseverance to spend five days in watching them. And now haven't we another philosopher who will take up the work, and find out what it is they do? Were the honey-combs built against a pane of glass, you could easily see whether they licked up hon- and put it back, or not. No doubt the comb-builders get wax from idle bees. I beg pardon for misunderstanding you.

HONEY FROM ORANGE-BLOSSOMS; SEE PAGE 685.

As I live right in the home of the orange, I think that I can give some light on the above subject. Bees do work on orange-blossoms when in bloom, at all times of the year; the seedling orange blooms from April 1 to June 1; the budded orange, from Nov. to May. Blooming as they do out of the general honey season, it is difficult to obtain any *pure* orange honey, except from the seedling, which is in bloom when the honey seasons opens. The first extracting will sometimes be somewhat flavored with the orange; but as the sages are then in bloom, and other plants, I think it would be a little difficult to obtain honey that could be truthfully labeled "Orange Honey." See page 578 in regard to bees working on orange-blossoms. The orange-blossoms are of a waxy white, and resemble the tube-rose in both looks and fragrance. **W. W. BLISS, 80.**

Duarte, Cal., Nov. 10, 1883.

Many thanks, friend B., for the information you give in regard to orange-blossom honey. One reason why we wanted to know about it was, it has been a kind of fancy name for bogus honey-dealers to put on their labels.

SOME OBSERVATIONS ON POOR SEASONS.

This season is in striking contrast to that of 1882 in this locality (see my report, page 608, December number GLEANINGS). I commenced this season with 11 colonies; increased to 32, mostly by natural swarming; sold 3; united 3; have now 26, about one-third of which are in poor condition for winter. The fore part of the season was good. Bees gathered a great quantity from white clover and linden. I have never known bees to swarm so much before, some colonies giving as many as four swarms. This state of things was followed by a very severe drought, commencing about the middle of July. Bees used up their honey; some have already starved, where their owners have neglected to feed. I let some of mine run very near the point of starvation; but I have learned by experience what I before knew only by precept, to be ready with the sugar-barrel; and while experience keeps a dear school, its lessons are more forcible, and more apt to be heeded.

I obtained 700 lbs. of extracted honey. No surplus in the fall; and had it not been for the yield in October from the white aster I believe there would not have been 25 lbs. of honey in my apiary at the beginning of winter. As it is, about one-third of mine have to be fed a few pounds of sugar. I am now feeding. The weather still continues warm; but little frost yet.

THE WAY I WINTER.

I confine the bees to the lower story; contract still further by division-boards, unless the colony is large. Pack at side (in most cases one side only), and top, leaving enamel cloth on as in summer. I have used chaff sawdust and old rags. This fall I used forest-leaves and sawdust; leaves at side; about an inch of sawdust on top; then fill the remainder of upper story with leaves, putting it loose in the hives. The principal reason I have for using this method is, that by it my fall and spring counts have always been the same, although I expect to lose some this winter. E. C. FISHER.

Sissonville, W. Va., Nov. 8, 1883.

FROM 23 TO 53, AND 3300 LBS. OF HONEY.

The summer is past, and winter is here once more, and the bees are prepared for winter also. My report for the summer's work with bees is, 3300 lbs. of honey—2500 extracted, and 800 comb honey. I commenced in spring with 23 colonies of bees; 5 of Italians, the rest hybrids; 8 weak colonies, 15 strong. I have increased to 53. My best colony made 225 filled sections, one-pound; next best, 275 lbs. of extracted honey; third best, 216 lbs. of extracted honey. Best new swarm made 75 lbs. of comb honey. I used 20 lbs. of fdn. for brood-frames, and 5 of thin fdn. My bees are prepared for winter on the summer stands. Some are packed in boxes with leaves, and some with straw packed around them, and covers made of shingles. I wintered last winter the 23 colonies without loss, the same as I have the 54 stands now.

Honey is pretty cheap around here this fall; some farmers have sold their honey (and comb at that) for 8 cents per lb. I got 14 cents wholesale for my comb honey, and have got 10 cents for what extracted I have sold; have 500 lbs. yet. There was a heavy fall yield of honey, and almost everybody got some, who had bees, and there are lots of bees.

TRUANT SWARMS.

There were 5 swarms of blacks which came to my apiary the past summer, but I did not get to save any, for they all settled on a hive, and got stung to death. I do not mean they all came at once, but at different times.

A HOME-MADE SAW TABLE.

I made and sold 40 Simplicity hives last spring, besides what I used of my own. I have made all on a saw of my own make that is turned with a crank. It is made something like that saw pictured in the February and March numbers of GLEANINGS, made by Chas. Kingsley, only I have the fly-wheel underneath, and the gauge on the other side of the saw. I would not trade one made like mine for two made in that shape. J. A. THORNTON.

Lima, Ill., Nov. 15, 1883.

WINTERING—DO BEES NEED WATER IN WINTER?

I should like to ask a few question in regard to wintering, and preparing for winter. I wintered in chaff hives last winter, with wood mats between the frames and chaff cushion. The mat was tightly closed with propolis. When opened in spring, the combs were quite moldy. My notion is, that the mat coated with propolis, or the enameled cloth is not open enough to let the moisture pass off readily. I would ask your advice in using screen wire in their place. One other question: I have been reading Mr. Langstroth's work, and I see he speaks very positively on pp. 342 and 343, that it is necessary to give bees water after the middle of January, until the weather will permit them to go out after it, and that the loss of bees is very great for the want of it. I have looked through your A B C book, and have failed to find any thing in regard to giving water in winter. W. H. CARPENTER.

Springboro, Warren Co., O., Nov. 19, 1883.

Friend C., Doolittle gave us some time ago a solution for this difference in experience in regard to a close covering over the bees or not. A strong colony, it seems, will keep a mat dry, whether it is covered with propolis or an enameled sheet, while the weak ones, being unable to generate the requisite heat, will let their combs get damp and moldy. Wire cloth would be no advantage, unless you put a new sheet on every season, for the bees will fill up every mesh, and make it as impervious as the enamel cloth. If you want a porous cover over the bees, use a new wood mat or a sheet of burlap.—Whether bees need water in winter or not, is an undecided matter. Sometimes it seems to have the effect of quieting them, and of enabling them to use stores of candied honey. But at other times, even though they take it with avidity, it seems to have the effect of producing dysentery. Prof. Cook made a pretty fair test of the matter, and the bees that were watered had dysentery, while the rest wintered all right.

MY REPORT FOR 1883.

As I did not make a spring report, perhaps it would not be out of place here. The first of June found me with 30 fair colonies out of the 45, put into the cellar Nov. 20, 1882. The second day of March was the only day between the 20th of Nov. and the 5th of April that the bees could fly.

DYSENTERY AND SUGAR SYRUP.

At that time every colony I had was suffering badly from dysentery, and a number of them died. As the day was warm and pleasant, I set them all out; and such a mess, in a few minutes! The snow was completely discolored, and you could smell them 10 or 15 rods from the yard. After they had had an hour's flight I began feeding them sugar syrup, which I had prepared and warmed by tipping up the front of the hive, and pouring it in at the entrance, giving each colony 5 lbs. of syrup, which was all taken up and stored in the combs before I set them in, in the evening. I saw no more of the disease the rest of the winter. I set them out for good the 5th of April, and now for the results of my season's work.

FROM 30 TO 50, AND 3250 LBS. OF HONEY.

I took 2000 lbs. comb honey in 2-lb. sections, and 1250 lbs. extracted, all from Alsike clover and basswood. Increased to 56, in good condition for winter' partly fed up on sugar syrup. Honey is mostly sold in my home market at from 15 to 20 cts. My queens are all bred from Doolittle's best. WM. BERRYMAN.

Geneva, N. Y., Nov. 20, 1883.

FROM 3 (AND SOME MORE) TO 30, AND NO HONEY.

Here is my report for 1883. I commenced the season with three swarms, one of which was queenless. The season has been cool most of the time. Frost came on the night of the 8th of September, and killed all flowers, and vegetables in general; and yet, notwithstanding the cold and backward spring, bees have done pretty well. I have taken no honey, except for table use, as honey was not my object this season. I purchased a Holy-Land queen (tested) of W. P. Henderson, Murfreesboro, Tenn., which came to hand April 16th, and I have from that queen and her progeny 10 fair colonies in good wintering trim: and from the other two I have 15 colonies. I have climbed, and transferred from the timber into movable-frame hives, 2 colonies; have taken three which were intended for the brimstone-pit, and have fed them with sugar syrup until they have ample stores for winter. I have 30 all told, and have them all neatly packed on summer stand in chaff. If I am a candidate for Blasted Hopes, just place me where I belong. Counting the three in the spring at $10.00 each makes $30.00; and the 27 increase at $5.00 each, makes $135.00, and I sold 2 four-frame nuclei with hive for $10.00. Sold queens to the amount of $5.00, which sums up for income, $150 00, and the outlay for the season for lumber, etc., $10.00, which leaves me a profit of $140.00 on the bees. A. L. LINDLEY.

Jordan, Ind., Nov. 15, 1883.

Friend L., your remark about increasing the Holy-Land queen to ten colonies reminds me of a question my brother asked me a few minutes ago. His home is in Mitchell, Dakota; and as he was getting ready to go he asked me if he could build up an apiary from one of those little boxes with bees in it—meaning some cages of queens ready to go by mail that he saw in the factory. Now, I told him he could not; but as you state it above, perhaps I am mistaken. Joking aside, you have done well anyhow, if your bees all winter, and I hope they will. I can do so much to help you along, without very much trouble. Your figures look first rate. I do not think we shall put you in Blasted Hopes just yet.

BOTTOM VENTILATION.

I thought I would write you, and give some of my experience in bee-keeping. I saw in GLEANINGS, on page 537, that you wanted some reports in regard to lower ventilation. I have been keeping bees for 30 years, and have always wintered them on their summer stands, by raising them and placing blocks of wood between the hive and bottom-board, one inch thick. I have had all kinds of hives, and generally they winter well, unless they take the dysentery. Last winter was very severe on bees. I lost about five per cent of mine, with outdoor wintering.

CAN BEES HATCH OUT IN 14 DAYS FROM THE LAYING OF THE EGG?

I want to tell you something about my bees swarming this last season. I had 65 swarms that I hived, and one of these I put in the hive June 8, and on the 22d day of June they swarmed, and, without clustering went to the woods. I have since found them. There was nothing strange in their going to the woods; but there *was* something about that hive that was strange and new to me. After the swarm left I went to the hive, and the ground was strewn with young bees that could not fly. I began to help them in the hive by taking it off the stand and placing it on the ground. You may say they were old bees that got knocked down in the rush of swarming. They were young bees, sure. This was a Quinby hive they were in. I examined in the hive to see the young bees crawling out of the comb. They had been in the hive just 14 days. I put two frames of finished comb in the hive, which I had taken out of a hive the bees died in last winter. There were no eggs nor brood in them. I want to know if you ever had bees to swarm in two weeks after hiving them, and have young bees hatched, and crawling out of the hive.

HOW LONG WILL BEES LIVE IN A HIVE, WITHOUT CHANGING THE COMB?

I have one that has been 20 years in a box hive, and it has always been wintered outdoors with bottom ventilation. There is one of my neighbors who has one that has been 28 years in the hive (it is a box hive also). I put both of those old swarms in the hive. I have 50 of the Quinby hives, and 20 more of all kinds that I expect to winter outdoors.

BEST PACKING FOR BEES.

I find the best packing for my bees is plenty of good white-clover honey; when they have that they are pretty sure to winter. BENJ. VEACH.

Springport, Ind., Oct. 29, 1883.

Friend V., although I can not see where the mistake comes in, yet I am sure you have made one somewhere. I do not believe that bees can be hatched out in 14 days, any more than I believe that corn may come up the same day it is planted. No offense, of course, for I know you talk honestly, only I can not see how it is possible. By some "hocus-pocus," I can not just tell how, there must have been young larvæ in those combs that you put in that hive.—I believe it is pretty well settled, that bees may live and do well in the same combs for even 30 or 40 years.—Friend V., I think we shall all have to take off our hats, and own up the corn on your last observation, even if we do discount that part about the bees hatching in two weeks a little.

FLORIDA.

Well, at last I am in Florida. The weather is delightful; no frost yet. Yesterday I overhauled my bees; they are full of eggs and brood, having been here now 3 weeks to-day. They are flying out to-day as early as 8 o'clock A.M. I shall leave here for New Smyrna, Fla., on Monday, and will settle on my location, then have bees forwarded. I write you fully from there. I inclose a sample of plant growing here in father's yard, which I think is the Simpson honey-plant. It is now in full bloom. Please advise me what it is through your next No. I will try to have plenty of early queens for you in April, and I have no doubt a success can be made of shipping bees to Florida for wintering, at a cost of not over $1.25 per swarm from Western N. Y. I also send you two Florida papers, and an invitation to come to see me when I get fixed.

T. GRAHAM ASHMEAD.

Jacksonville, Fla., Nov. 17, 1883.

Friend A., we are glad to hear from you, and hope you will like your new home. The plant you send is not the Simpson plant, but our old friend the spider plant, of which so much has been said. This seems to indicate that the spider plant is very widely disseminated.

MOVING BEES SHORT DISTANCES.

I have 17 hives of bees, and I want to move them about 40 or 50 ft. from where they now stand, to a better place. When and how should I do it to the best advantage, to prevent bees returning to their present stands? I winter on summer stands.

Hannibal, O., Nov. 26, 1883. M. LUDTMAN.

Friend L., you will have to use considerable care in moving bees the short distance you mention. If you can arrange to have them kept in their hives by cold weather two or three weeks, you can move them without trouble; but if a warm day should occur, so there would not be more than three or four days between the time they took their flight from their old location and their next flight from their new location, they would go back so as to lose a great many. For our locality here in Ohio, I would say, fix your stands all in readiness in their new location before the ground freezes up; then wait till the middle of the winter, and some day when the temperature is somewhere about 40°, lift them from their old stand, and set them on their new one so quietly that hardly a bee will buzz. It would be well to make some provision several days before you move them, to prevent any of the hives from being frozen fast to their old stands; for if you raise the hives up with a snap, the bees would be likely to be roused up, and rush to get out. If the first flight, then, after being moved, is after they have got perfectly settled and quiet, they will be apt to take points in their new locations, and few, if any, return to their old one, provided the interval as mentioned above has been as much as three or four weeks; if a couple of months, it would be still better, of course. You will notice that some colonies are much more apt to go back to an old location than others.

IMPORTANCE OF SYSTEM IN BEE CULTURE.

Friend Root:—We are strangers to each other, but I feel as though I should like to get acquainted, and tell you my experience. I have had bees for the last fifteen years in the old box hives, till the winter of 1881, when they all died for me, and I think it was the best thing that happened me in all that time, as regards bee-keeping, for they never did me any good. I would save those that had honey enough, and try to winter them, and kill the rest, and get but very little honey; and generally those I would try to winter would nearly all die.

When I lost all my bees in 1881, I came to the conclusion that it was for want of system; and so I purchased two swarms. One was an Italian colony, and the other the common blacks. They were both very late swarms, with no foundation for either brood or surplus, and yet they gathered 51 lbs. of surplus comb honey in section boxes, and had an abundance of honey in the brood-frames for wintering purposes; and, not knowing how to prepare them for winter, I just gave them all ten of the brood-frames, with no cushions or packing, and left them on their summer stands all winter, and they came through all right. So you see I had two colonies last spring to start with. Well, I sent for A B C book, 5 lbs. of fdn., and about 250 section boxes; and during rainy days I would make hives and put foundation in frames, and had every thing in readiness, and all seemed prosperous till, alas! in May the worms got in the black colony, and were about to demolish it; but after I had given your A B C a careful perusal I went to work and transferred them by cleaning off all their brood-frames and putting them in a nice new clean hive. They acccepted their new home, and worked finely; and on the 11th of June it gave a large swarm; and on the 19th another, and on the 22d another fair swarm, My Italians gave a swarm on the last day of May and on the 7th day of June; and on the 10th day of July my first Italians that I hived on the last day of May gave a nice large swarm. So you see my two colonies have increased to 8, and gave me 230 lbs. of surplus honey in section boxes. I am satisfied, if I had had more fdn., and could have prevented after-swarming, according to instructions in A B C book, I could have got twice as much honey. But I have fed my late swarms, so I think they are all in good condition for winter. I have furnished all my hives with Hill's device for covering frames, and have them all packed with chaff cushions. JAMES HUSTON.

Vanlue, Ohio, Nov. 22, 1883.

A SUBSTITUTE FOR WAX OR SOLDER FOR SEALING UP THE JONES HONEY-PAILS.

We tried the waxed strings; and, after getting out of patience, thought we would try our label sticker —te-nex-ine—a very adhesive compound, we think ahead of glue or cement. With one of your 5-cent brushes, paint the inner edge of the cover so as to get the sticker where the cover and pail meet; press down firmly, then put a few drops in the groove, and tip the pail so it will run around the groove just where the wax string goes, and the job is done, and, as soon as dry, are ready for shipment, and in one-fourth the time, and less than one-tenth the expense, and it looks nicer, and no fussing to warm over a stove. I think it can be purchased at $2.00 per gallon; 35 cts. per pint bottles. F. H. CYRENIUS.

Scriba, N. Y., Oct. 24, 1883.

As soon as we received the above letter from friend C., we sent at once to the manufacturers of te-nex-ine, and have now given it a pretty thorough trial. This cement hardens in a little while, and still looks, after it has hardened, exactly like a liquid, or clear glass; in fact, you are surprised to find it is hard upon touching the surface of it; and when thoroughly set it seems about as hard as glass, or clear horn would perhaps express it better. I do not see but that it is good for cementing almost any thing that is broken. It seems wonderfully adhesive, as well as strong. We can furnish it at the price friend C. quotes, or we can give you a pretty good-sized bottle with brush, for only a dime. Of course, it is not mailable. It seems to me it is going to be a great acquisition, for the handsome appearance of every thing mended with it is another recommendation. We have not yet tested it for shipping honey, but it will doubtless soon be tested. Many thanks to friend C. for calling our attention to it.

Friend Root:—Quite a number of friends have notified me that they failed to see their names in the list of new members at our convention in Toronto. Tell them, please, that I am too busy now to look the matter up; but that I shall do so before the issue of your next number. CHAS. F. MUTH.

Cincinnati, Nov. 22, 1883.

FRAMES, PROPOLIS, ETC.

I guess I shall have to apologize some. In my last month's communication, in speaking of frames I should have said that, according to my estimation, the *all-wood frames not wired* were too light for use in friend Abrams' locality. On account of the great amount of propolis, some of the frames were glued fast all around. As to the source of this propolis, I am not prepared to say. The second reason, but not an objectionable one, why these frames are too light for friend A.'s locality is, that it is an extremely good place for honey. I do not think I ever saw frames more completely filled with honey than were friend A.'s; and it being so very warm, the combs are much inclined to sag. In defense of friend A., I will say that he had his frame well nailed, and not simply driven together. CHAS. KINGSLEY.

Greeneville, Tenn., Nov., 1883.

WINTERING BEES WITH DOWNWARD VENTILATION.

My father has been keeping bees in the old square box hives for nearly 30 years. He keeps blocks under his hives about an inch or 1½ inches thick, and lets them be in that condition all winter (on a plank in a shed), and he seldom has any bees to freeze. Perhaps you would like to know how much honey he gets. Well, sometimes he gets some honey, and some summers he doesn't get any. He usually gets one and sometimes two swarms from each hive, and they swarm about the last of June, or perhaps not until July, and only a few of them gather enough honey to keep them over winter. He and I have concluded to go into partnership with our bees, and expect to put all of his in chaff hives next spring, and Italianize them also. CHAS. MATTHEWS.

Fredricksburg, O., Nov. 20, 1883.

DOWNWARD VENTILATION.

I notice on page 536, JUVENILE, about downward ventilation. Last winter was very cold; my bees, some of them, froze to death, well packed in dry-goods boxes, while my neighbor's bees stood on a bench 2 feet from the ground in single-wall hives, with 8-in. space above the frames, entrance open, nothing to protect them from the cold, and old cracked hives at that. I was in Southern Illinois a month ago, and saw some bees there that were standing in the same spot 4 years; and when the man hived them it was very warm, and he put a brick under each corner of the hive above the bottom-board. When I saw them they were full of bees, with combs about 1½ inches below the edge of hive. They were hybrid bees, and hardy ones. RICHARD EDMUNDS.

Grand Crossing, Ill., Oct. 22, 1883.

SOME BEE-FRIENDS IN TROUBLE.

Friend Root:—We deem it advisable to state, that several cases of foul brood developed in one of our apiaries the past season. We never saw a case of it before; and if we sent out any infected colonies or nuclei to our customers, it was unwittingly and unknowingly done. When discovered, prompt and effective measures were taken to eradicate it, both by the burning and starvation processes, and, we are happy to say, with the most satisfactory results. All orders filled hereafter will be from apiaries that have never had a case of foul brood.

FLANAGAN & ILLINSKI.

Belleville, Ill., Nov. 21, 1883.

We are very sorry to hear of this, friends F. & I. But we are glad to know that you have decided to come out frankly, and own up to the condition of affairs. Your record has been so fair for years past, that I think no one will accuse you of purposely or even willingly scattering the seeds of this dire scourge. I presume you have, of course, made arrangements with those to whom the foul brood was sent (for you can probably easily trace it), that every possible effort be made to kill it out wherever it has gone, as speedily as possible. I have for years been afraid to buy bees indiscriminately from a distance, for fear of just such a calamity. Now that we know how to raise bees, and multiply them with such exceeding rapidity, would it not be well to rear them, instead of buying? A pound of sugar is a good deal cheaper than a pound of bees; and when the honey-yield fails, colonies may be increased with enormous rapidity by sugar feeding. Then we are safe from any contagion that may be unwittingly contracted.

INTRODUCING QUEENS BY CHLOROFORM.

D. A. JONES'S PROCESS.

CAN you tell D. A. Jones's method of introducing 50 queens in 50 minutes, as he told in the Canada Convention? See JUVENILE, Sept. 15, 1883, page 556. J. C. DICKINSON.

Hudson, Mich., Nov. 12, 1883.

We submitted the above card to friend Jones, that we might get the plan correct, without any mistake, and below is his reply, which was sent to us in the shape of a proof-slip, prepared evidently for some paper. We mention this, so that said paper may not accuse us of borrowing without giving due credit. Here is friend Jones's answer:

I take an ordinary bee-smoker with a straight barrel or fuel-box. Tapering smokers, such as Clark's, would not be as good, as there would be more difficulty in fitting the sponges. I then get three sponges that fit moderately tight to the inside of the barrel, when pushed in. Then press one sponge into the bottom of the barrel; dampen the second sponge with one teaspoonful of chloroform, and put it in next; then put the third sponge on the top. You then have the sponge filled with chloroform between the two dry ones. Adjust the nozzle of the smoker, and you are ready for operations. Proceed to your queenless colonies, and puff in the chloroform at the entrance, the same as you would smoke them, for, say, a quarter of a minute; then proceed to the next, and so on, for, say, about two minutes; return to the first hive again, and give them a few more puffs with your chloroform smoker, and let your queen run in. Do this until you have gone over all those you first puffed. Thus the bees in each hive have had about two minutes in which to get sleepy before the queen is introduced. Now, if it is in the middle of the day, and the bees are returning from the fields, I return to the first hive, after, say, two minutes, and give them a third dose, as the returning bees require a little sniff to keep them quiet. I have the past season taken the worst cases of fertile workers, and the most difficult queenless colonies that I ever had to deal with, and I never missed yet. Now, why does it work, or why use it? Simply because there is a principle governing the introduction of queens; namely: That the bees must be kept quiet, and without a desire to fight or kill the queen, and the queen must act as if just hatched — she must be quiet and innocent, and must exhibit no fear.

The chloroform is distributed equally into all portions of the hive by this system; and if the entrance is not too large, the chloroform remains some time about the hive and comb, thus keeping the bees in a sort of a quiet, sleepy state, and they come out of that condition so gradually that the queen, being in with them, gets enough so that her movements are satisfactory to the bees, and there is no danger of her being balled. We have also been experimenting the last season, and we intend to continue our experiments on introducing queens during the honey season, without chloroform or without caging. It can, and has been done, as we have ourselves done it very frequently, but it requires considerable experience to know just the circumstances under which she will be accepted, and to be able to detect any hostile act of the bees, and guard against it in time.

FEEDING BY POURING THE FEED ON THE BOTTOM-BOARD OF THE HIVE.

It is going the rounds, that I stated at the Convention held in Toronto that I poured the feed into the entrance. Such is not the case, and I never stated so if I was duly sober. That would be one of the best ways of inducing robbing. I always feed by tilting up the front of the hive, lifting off the cover, and pouring the feed behind the division-board into the back end of the hive. This allows the bees to pass back under the division-board, and take up the feed. If too cold, I pour the feed into empty combs, and place them in the body of the hive; but, 99 % of my feeding is done by pouring it into the back end of the hive. D. A. JONES.

You will observe, friends, that toward the close of the above article friend Jones speaks of experimenting in regard to introducing queens during the honey season, without any caging or introducing at all. You will bear in mind how much I have said upon this subject. It is my impression, that 100 queens may be turned loose at the entrance of 100 queenless hives, without losing more than 5 per cent, on an average, if it is done during the honey season, and toward the close of a day that has furnished abundance of forage. Where queens are plentiful, and apiarists crowded for time, I believe I should recommend this plan of introducing. But it requires, as friend Jones wisely remarks, "considerable experience to know just the circumstances under which she will be accepted."—In regard to feeding on the bottom-boards, I am glad friend Jones has made the correction, because it seems to me as though pouring it in at the entrance would be akin to madness, after honey had ceased to come in. Of course, it should be understood that, to feed in this way, the bottom-board must be absolutely water-tight. They can be made so by pouring in melted wax.

COLOR HEREDITARY.

TEXTURE OF HAIR, SKIN, ETC.

ON page 537, of JUVENILE, friend Norton gives a valuable exposition on "the color line." He says, "Yellow bands are not in themselves incompatible with hardiness, courage, and industry." Still, he says at the conclusion, "Let us breed for them, as well as for prolificness, hardiness, industry, and gentleness;" and he wants to know, if a dark-colored Italian is worth more than a light one why a black one is not worth the most of all. Please excuse me, he leaves the thing rather loose.

WHY A BLACK BEE IS NOT AS GOOD AS A YELLOW ONE.

Every thing in nature is colored, inside and out; and the color always corresponds with the character. Nature always paints her coarse productions in rough drab; but more exquisite, or fine, in her best clothes. So, a certain dress signifies a certain quality. Thus, black signifies power; green, immaturity; yellow, ripeness, richness, etc. Hence all dark animals are powerful, such as the black bear, black snake, morgan horses, etc. And Indians and negroes are more powerful, hardy, and tougher, than the white race. But dark-skinned nations are always behind the light in all inventions and improvements of the age. Indians are good at robbing and stealing, and you won't find one negro in a hundred that will not steal. I was raised with them, you see, and know them. Daniel Webster was dark-haired, dark-skinned, and possessed great power of intellect, yet lacked purity; therefore a black bee has not as great instinct or intellect (if you will have it) as the yellow bee; then they have this robbing propensity. The reason why a dark Italian, or hybrids, are "hooped up" so is the combination of strength with that superior instinct possessed by the light strain of bees. A hybrid inherits that tendency to rob, from her black ancestors; and that sharpness from the Italian, gives them the knowledge how to get into a hive, or how to get honey from the fields. I prefer a dark Italian; but keep your entrances in such a shape that they will never get in, and each hive very populous, and you are all right.

Waco, Tex., Nov. 12, 1883. J. W. GUYTON.

Friend G., I once heard of an old minister who complimented a younger one, by telling him that his sermon contained much that was new and much that was true. Of course the young minister, just out of college, felt a good deal flattered, and thanked his old friend for the kind words; whereupon the old man replied that the trouble was, the part that was new was not true, and the part that was true was not new. I fell to wondering, while reading your letter, if we could not consistently say the same in regard to some of your bold ideas. It may be, however, that all that you say that is new is also true; but very much of it is surely quite new to me.

HONEY FROM THE OAK.

SOME ADDITIONAL LIGHT ON THE MATTER.

ON page 502, current JUVENILE, Mamie Keen tells us her uncle's bees are storing honey from "jack-oak." You say the tree is probably what you know as black-oak, and suggest that the honey is not of good quality. I mail you to-day a specimen of what some here call "jack-oak," while others call it "pin-oak." I would say concerning it, that it not only yields copiously, but the honey is first-class as to taste and flavor. In color it is a light amber. The flow from this source lasts longer than from any other in this locality, and comes in a time when most needed. This year it began about the first of June, and continued incessantly up to the present. The bees still give it attention early in the morning, though there is a world of ironweed, boneset, heart's-ease, and Spanish-needle in bloom around them. Through the month of July, and up to Aug. 10, they stored surplus from it.

The honey comes from the small bud you will see clustered in among this year's leaf-stems, and it is no doubt the bloom for the fruit of next year. The honey can be seen oozing out from near the base of the buds; and when one drop is taken by the bees, or brushed away, another gathers in a very few minutes. At night these drops get so large they fall on the leaves below, making still another honey-dew, whence it is taken by the bees. If I remember correctly an illustration of a specimen of the Southern live-oak seen last year, the leaves and some other features bear a resemblance to them. The tree is not evergreen here, but the leaves hang on till the next year's growth pushes them off.

PLANTS THAT SEEM TO PRODUCE A SOPORIFIC INFLUENCE ON BEES.

In the same package I also inclose you a specimen of a plant which yields a good flow of honey during the month of July. It grows in clumps which increase yearly, the old stalk dying, and new ones taking their places each year, and more being added to them. During the three or four years I have noticed it, it does not seem to die entirely. I have never tried raising it from the seed. Have noticed that a bee will occasionally sit on a large clustering head of them for as long as half an hour, never moving or stirring, apparently in a deep study, or dreaming; but, when touched, it would seem to wake to a realizing sense of the importance of time, and in great haste secures its load and goes off toward home. Indications are good for a large crop of fall honey here.

I. H. STANLEY.

Boyleston, Ill., Aug. 29, 1883.

Friend S., the drawing you refer to is found on page 182 of our April No., 1882. It very much resembles the sample you sent, and the oak is probably something nearly related to it. Since you mention it, I am inclined to think that the honey found on the oaks at friend Cork's, in Canada, was from these immature buds, and dropped on the foliage below. His description in a recent number corroborates this idea, and it seems to be a legitimate product of the tree, and not in any way connected with the agency of insects.—We were so unlucky as to lose the plant you inclosed, but I think it was the same as one we tried on our grounds, which I discarded, because so many bees remain dreaming on the heads. I am inclined to think these dreamy fellows did not always get home, for several dead bees were found on the ground around the plant.

Ladies' Department.

FLORIDA.

TO Mrs. M. S., of Wellsville, Ohio. I have lived here seven years, and would not exchange our little home here for my native State, Indiana, and be compelled to live there. My health is better than ever before. We have had no frost yet. No day but that the "busy bee" was at work on the sweet-potato bloom, of which we have over an acre on our place, and I don't know how much more in the neighborhood. The flower resembles a morning-glory, but does not close entirely for several days. It secrets honey; but they get enough pollen from wild flowers to keep the lower story nearly full of brood. I am getting very much interested in the trees and honey-plants; would like to hear from our Southern friends what will do well here. We live on high pine land, very sandy, but salubrious. We have a good neighborhood, representing nearly every State. Have a good new schoolhouse, in which we have school, preaching, and Sabbath-school. There is a $25,000 hotel in process of erection; have a good store and P. O. We are five miles east of the Florida Peninsular R. R., and three miles west of the Fla. Southern R. R.; several private boarding-houses, where good board at reasonable prices can be had. All are engaged in orange culture. Some are cultivating small fruits in connection with their groves, and are quite successful. As to the question, "Can one have a comfortable living, and what at?" I can not answer, without knowing something of your ability — mentally, physically, and financially. I shall be pleased to answer all questions through GLEANINGS as to our "land of flowers," if you will ask them so I can, or inclose stamp if you desire a reply personally. But please do not expect too much of me, as I have the care of my home, my bees, and my mischievous eighteen-months old boy. May I come again?

MRS. BELLE MCMAHAN.

South Lake Weir, Marion Co., Fla., Nov. 19, 1883.

By all means, come again, Mrs. M.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, DEC. 1, 1883.

THE Lord saveth not with sword and spear.—I. SAM. 17:47.

PROVIDENCE permitting, I shall be present at the convention in Flint, Mich., Dec. 5 and 6.

UNTIL further notice we will pay 30 cts. cash, or 32 cts. trade, for fair average beeswax. We will sell the same for 35 cts. for the common run, or 40 cts. for the best selected.

FRIEND Viallon writes us, that, owing to sickness in his family, he has been compelled to neglect correspondence for almost two weeks, but will tend to all inquiries, and other unsettled business, now very soon.

WE have on hand about 25 queens. Part are tested, and part are dollar queens, received from our Southern friends. If any of you are short of queens at this late date, we shall be happy to supply you. They will be shipped at our risk.

THERE is or has been a strike on window glass; but, luckily for bee-men, it happens at such a time that they do not need to use much of it. For the present, we shall have to withdraw all quotations on window glass. When prices fall, we will let you know.

WE can now furnish the well-known Gospel Hymns, parts 1, 2, 3, 4, words and music, bound in boards, for an even 75 cts.; by mail, 10 cts. more. In tens and hundreds, a still further deduction, as you will see by our price list. The same, words only, 25 cts.; by mail, 30 cts.

IF the credit does belong to friends Benton and Doolittle for having developed the business of mailing queens across the ocean, I think we can fairly claim some credit for having developed it for shipping queens and bees any month in the year. A shipment of nuclei goes to Shreveport, La., while we write.

THE trade on the new fountain pumps has assumed such proportions that we are now enabled to sell 100 pumps for $50, which is a better arrangement than you can probably make with the manufacturer himself for that number. As our profit is *extremely* small on the transaction, we shall have to have cash with the order.

WE are pleased to tell you that we are now able to furnish the celebrated Dixon axle grease at only 10 cts. per box; 95 cts. for 10, or $9.00 per 100 boxes. It has formerly been 15 cts. If you have never tried it to lubricate wagons, buggies, vehicles, and machinery, it would pay you to order a box for trial when you are getting goods from us.

A PREMIUM FOR SUBSCRIBING EARLY.

AT the very small profit we have in furnishing GLEANINGS semi-monthly for one dollar, we can not very well offer premiums for subscribing early, although we will allow you to select any article from the 5-cent counter, to please the children, where you send in your dollar before Jan. 1, providing you say what you want, and inclose the necessary postage to have it mailed you.

OUR offer of 5 per cent discount before the 1st of Dec. brought us quite a little boom of business, and set our factory, even to the wax-room, "buzzing;" in fact, it has had the effect of giving wax an upward start. Still, we are not so crowded but that we can easily handle a few more good orders, and therefore we offer *four* per cent off for all orders received before Dec. 15. This, of course, is aside from our regular discounts, as before.

WE have to-day, Nov. 30, 6388 subscribers — just 150 more than we had last month, and the largest number that GLEANINGS ever reached. Before the January number comes out, we shall probably have to take the customary drop at the beginning of the new year. Many thanks, friends, for the kind support you have given us.

ALSIKE CLOVER.

I AM rejoiced to be able to state, that we can furnish alsike clover once more for an even $10.00 a bushel; $5.50 for ½ bushel, or $3.00 a peck. Per lb., 25 cts ; or per lb. by mail, 18 cts. per lb. extra for bag and postage. I do not know what the price will be next spring, but I sincerely hope we shall not have such a boom on it as we did last spring. The above prices will be given until our next issue, at any rate.

"STORY OF THE BIBLE."

This book is having a wonderful sale, and it is certainly right that it should have. It has been already reprinted in England and Canada, by publishers there. It is also being translated into different languages by missionaries in different parts of the world. Our friends should remember that it is not a story *about* the Bible, but it is the Bible put into the form of a story by one who is fully competent for the task; that is, the whole purpose, end, and aim of the Bible is presented in a connected line of thought, and put in language so simple that a child may understand it. At the same time, it affords one of the best helps to a proper understanding of the true spirit of the Bible of any of the countless works written with this end in view. The large number of 127,000 copies have been sold in the United States alone. While it is a very nice large book, full of pictures, we furnish it at only 75 cents; and by mail, postpaid, for 90 cents. I do not know of any thing in the world that would make a "wiser" Christmas present for a boy or girl, or even a grown-up person, than this book.

OUR NEW OFFICE.

OUR new office is now finished and occupied. I like to tell you about it, because in one respect many of you will likely feel interested. For instance, we have one whole desk for subscriptions, and one clerk has entire charge of every thing concerning subscriptions for GLEANINGS. As she has nothing else to do, she seldom makes any mistakes in regard to the time it is paid for, the address, etc., etc. The clerk who opens the mail has one entire desk, devised and arranged especially for her work by Mr. Gray. Next come the two large desks for the ledgers, and the book-keeper and her assistants. This department is almost an office in itself, inside of the large office. Next comes the queen-clerk's desk. She has a desk all of her own, with room for an assistant during the busy season. Back of this is a desk for sample copies and price lists. Then comes the desk of the stenographer, with a bright new caligraph. He not only takes down all kinds of business that I dictate to him, but does copying and receipting for all the clerks in the room. This brings us to the east end of the room, where our friend Kitty presides over the files of letters, as I have before explained to you. Her desk also accommodates an assistant when needed. Now we come to the desk of the mailing clerks, occupying all the north side of the room. It is a long affair, with two L's to it, and an additional desk to hold scales for weighing packages. Three and sometimes four will be employed at this desk. Adjoining the vault where the ledgers are kept, and most valuable mailing goods, is a desk where two clerks are employed in wrapping up goods ready for the mail. As we have had some trouble about wrapping up the wrong thing, we propose having a printed wrapper for every thing in the price list, and giving the name and description of it on the outside. This will enable the shipping clerks (who, perhaps, have the most responsible post of any in the building) to avoid mistakes; for if the name and description are printed on every article, they can't very well get the wrong thing. In the center of the whole group of desks and clerks sits your old friend Novice. Come to think of it, he doesn't often sit, though, after all; for when anybody comes after him, the clerks have a sort of standing joke of telling a visitor that his cheapest way to find Novice will be to stand right still until he happens to rush by. My desk is made of maple and black-walnut, and we all think it very pretty. The maple came from an old tree that grew on my father's farm; and when I sit down by it, I often think of that kind old father. I believe I never had a desk of my own before; and with the aid of the many drawers, and ample room on top, I hope to be able to get along without losing any of your communications, or overlooking them, hereafter.

A GREAT number of jangles come about, by some friend asking for an estimate on something he wants. Well, we give the estimate, and then the friend makes an order; but in his order he does not say a word about having had an agreed price for the goods. Now, if we get the price lower after the goods are made, all is well, of course; but if we should figure it out higher, then there is "music;" or, worse still, our customer gets mad, and just lets the matter stand until he gets a statement, which he considers a dun. Then he accuses us of being frauds and cheats, and of "going back on our word," etc. Sometimes he writes he has got both our letters, and can prove we are cheats, by placing them side by side. From his standpoint of view, it does look bad, I know; but from our standpoint it looks like this: With hundreds of letters daily, how are we to remember who has had an estimate, unless our friends put in something like this simple little sentence at the end of their orders: "As per your agreement of — date"? Do you see the point, friends?

MY attention has been called to some remarks made by friend Kingsley on page 668 of our Nov. No. It seems that some of friend K.'s words wounded the feelings of a good friend who uses tobacco, and who writes us an excellent article in defense of it. The writer of said article I judge to be a Christian, a gentleman, and a scholar; and after reading his communication, which is by far too lengthy for our columns, I regretted that I had let friend K.'s strictures pass. Every one has a right to his opinions, it is true, on tobacco as well as other matters; and we who think that the use of tobacco is a sin have no right to wound the feelings of those who may think otherwise. Friend K. said that tobacco is, as a rule, confined to the lower classes. Perhaps he should not have said this; and I am sure it was really not the thing to say, that a man who uses tobacco has the juice of Satan in him. I fear we too often lose sight of the fact that we who profess to be followers of Christ should bear in mind that Christ's kingdom is to prevail, not by strength nor by might nor by sarcasm, but by a Christian spirit, and a spirit becoming one who professes to be a follower of Christ.

THERE are two men, whose names are pretty well known through the bee-journals, who have been buying honey in considerable quantities, and can not pay for it, nor return the honey. One of these I have been laboring with for nearly a year; and although I have been requested to publish him, to prevent him from wronging any other innocent honey-producer, I have delayed doing so, hoping he would pay up, and because I very much dislike to do such a thing. Within a few weeks I have been told this same man has purchased *another* considerable lot of honey, which he is also unable to pay for. I fear I have erred in listening to his promises to do better; and unless he does fix up the matter some way satisfactorily by the first of January, I shall certainly publish him, to prevent his wronging any more of the friends. The other party I have mentioned will take notice, that I shall do the same by him. I dislike wrangles; but when I am obliged to go into it, and the public good demands it, wrangles it must be. If there are others who are guilty of the same offense, they can take this note as a warning. I know it is a little bad to create suspicion in this way; but the names of both parties will be given very soon, unless the matter is straightened up in some way; and as soon as it is straightened up I will give you notice.

DEAR FRIENDS, I am in trouble. When I decided to make GLEANINGS a semi-monthly, I thought we might get in pretty much all the matter that ought to be published, and not crowd the juveniles very much either; but since the honey season closed, and you seem to have a little more leisure, the amount of matter piled in upon us is wonderful. Important letters that ought by no means to be overlooked have been covered up by the heaps — manuscripts overlooked and crowded out. I have been so full of business cares that I fear a good many times I have published what ought to have been left out, and left out what I ought to have published. To tell the real truth, there are heaps of letters that I have not even read; for when I saw that they ran up to 15 and 18 pages, I was compelled to lay them aside until I got a little more leisure. But with the sudden start-up of business we have had, the leisure has not come, and the letters are even now piled in the neat drawers of my new desk in the office, waiting for me to consider them. Old GLEANINGS and young GLEANINGS together won't begin to hold the amount of good matter sent in. I know some of you feel hurt, and I don't blame you; but, what shall I do? I really do believe it would be better to try to make your articles a little shorter, if you can, and thus let us hear from a good many each month. I know I might run them over and cross out a portion of each; but this is a very laborious undertaking, friends, and it is something I would not dare to intrust to any one. I really can not afford to make GLEANINGS any larger for a dollar, and I do not believe it is best to charge you more than a dollar. Do you?

ANSWERING LETTERS PROMPTLY.

THIS is an excellent thing to talk about, you will all admit; yet I fear there are very few people in this world who give a prompt answer to every letter, of whatever nature, they receive. I have sometimes thought that it was a kind of disease we fall into, of putting off and putting off; for the oftener we put off a thing, the more liable we shall be to continue putting it off. If you give way to the temptation a little, you will soon give way to it more, and by and by you will get hardened and calloused, as it were, and get so you have a don't-care spirit, like all other kinds of sinners. Just now quite a number of the bee-friends, and some of them prominent business men, write saying they have not answered their letters for a week or two weeks, or something of that sort, on account of some calamity or sickness, etc., but promising to see to it soon. Now, there are times when this is inevitable, or pretty nearly so; but, let me make a suggestion: A great many of you are paying out considerable money for advertising. Very likely some of it goes into my own pocket. But for all that, I want to tell you that the best advertisement a business man ever had was the reputation of answering right back promptly. Almost any kind of an answer is better than no answer, and I am sure it will pay you, my friends, to have some member of the family, if you can not have a hired clerk, to answer every letter the minute it comes from the postoffice. Almost any of you can pick a bright little girl who can say, "Pa is sick," or "gone away," or "fell from the hog-pen, and when he is better he will attend to your business." And after a little you will get so you can dictate to this bright apt little school girl in a way that will enable her to do a vast amount of important business in a way that will help you greatly, and develop her growing and grasping little mind fully as much as the algebra and grammar she studies at school.

"Forgettery."

I HAVE several times alluded to a new trouble that is getting to be quite a serious matter in business. It seems to be a sort of disease, as it were, that folks get into; and when it first began I felt sure it would not happen many times. But as business increases, it seems to be getting more and more common. The following will illustrate it:

"*Mr. Root:* You'll find draft for $2.00 for five smokers." W. W. KESSLER.
Columbia City, Ind., Aug. 31, 1883.

Now, friends, would it ever occur to any of you that friend K. did not mean to make a plain order for smokers? Our clerks so understood it, and of course sent him a package of five smokers, for that is exactly what his two dollars pays for. Well, just read the card below:

Mr. Root: I sent you draft, and stated in letter that I sent you draft for those smokers you sent me, and it was but a few days longer when here came a basket of smokers by express. I knew I never ordered them. I never heard from you until yesterday. Not knowing who was the owner of these smokers, I paid the express charges, and am waiting for further orders. Last fall I got wire from you the same way by mistake. What shall I do? sell them, or send back? They are in a basket, as you sent them.
W. W. KESSLER.
Columbia City, Ind., Nov. 22, 1883.

You see, friends, the $2.00 was sent to pay a bill of that amount, which he already owed for smokers; and yet you will note that he makes not the slightest mention of owing us a bill; nor does he give an inkling that might lead us to consult the ledger, and see whether he had an account here. And yet in his second communication he says emphatically, "I never ordered them." You observe, too, at the close, he says he got wire from us the same way. You may have observed that we have put a little notice on our postal card, to guard against this same sort of trouble; but yet during the past summer we have over and over again sent people more goods, when they intended only to send the money for something they had already had.

MORAL:—Whenever you send money anywhere, be sure to tell *why* you send it, and for what purpose you wish it applied. And please do not repeat your orders, in remitting money for what you have already received.

CONVENTION NOTICES.

The next meeting of the Keystone Bee-Keepers' Association will be in Scranton, on the second Tuesday of December, the 11th. GEO. C. GREEN, *Sec'y.*
Factoryville, Pa., Nov. 23, 1883.

The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., Jan. 8, 1884. N. C. BEAN, *Sec'y.*
McGrawville, Cortland Co., N. Y., Nov. 23, 1883.

The 5th annual convention of the N. E Ohio and N. W. Pennsylvania Bee-Keepers' Association will be held in Jefferson, O., on Wednesday and Thursday, Jan. 16 and 17, 1884. C. H. COON, *Sec'y.*

—THE—
American Apiculturist,
A MONTHLY JOURNAL
DEVOTED TO
Scientific and Practical Bee-Keeping.

Edited by a practical bee-keeper, and published in the broadest sense in the interests of the bee-keeper. Its list of contributors consists of the most practical, prominent, and successful apiculturists in America.
Our January number will contain
A FINE LIKENESS OF THE
REV. L. L. LANGSTROTH,
And we will send that number *free* to all those who send their addresses, plainly written, on a postal card. Address—
SILAS M. LOCKE, Editor and Prop'r,
SALEM, MASS.

☞ Sent for Three Months for 35 cts.; Six Months, 60 cts.; One Year, $1.00.

FRUIT AND HONEY.
20 BLACK TARTARIAN CHERRY-TREES BY Express for $1. *Well packed.* These are from two to four feet. Can send 20 small ones by mail postpaid for $1. CHAS. KINGSLEY,
Greeneville, Greene Co., Tenn.

EARLY BEES AND QUEENS FOR 1884.
Send for I. R. Good's price list of Holy-Land and Italian Bees and Queens for 1884.
12-1d I. R. GOOD, TULLAHOMA, TENN.

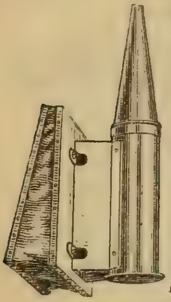
DON'T brimstone the bees. I will buy them, if you write at once. C. E. PRICE,
12 Smithtown Branch, Suffolk Co., N. Y.

FOR SALE.—Barnes Combined Foot-Power Saw, jig saw, 2 mandrels, 2 emery wheels, 3 cutter-heads; total list price, $52.00, at 40 per cent discount; also one mandrel for power, $5.00.
12d V. W. KEENEY, Shirland, Winnebago Co., Ill.

200 COLONIES OF
ITALIAN BEES FOR SALE.
TRY OUR IMPROVED ITALIANS.
Send for Price List. Address
Dr. C. W. Young, or C. F. Lane,
12-1-3-4 5d **LEXINGTON, MO.**

FOR SALE!
An 80-acre farm in Johnson Co., Mo. Good land, 60 acres of alluvial, none subject to overflow; good locality for bee-keepers; would make an excellent stock farm; church and school privileges; good one-story two-room house, with cellar. Society good. Johnson Co., by census of 1880, was second only to Christian Co., Ill.; 1882-'83, to none. Price only $30 per acre. Terms *very* liberal; only $500 down; rest on 4 years' time. Correspondence solicited.
Address S. P. CULLEY, Warrensburg,
P. O. Box 181, Johnson Co., Mo.,
Or J. U. GATY, Land Agent, or W. E. CRISSEY, for quality of land. 11½-12d

MAMMOTH RUSSIAN SUNFLOWER SEED, 10c per packet. Stamps taken. Address
T. GRAHAM ASHMEAD, Williamson, Wayne Co., N. Y.
12-2d



NOW READY!

NOW READY!

To fill orders for 500 of those splendid U. S. Standard Honey-Extractors, and 2000 of the new improved Bee-Smokers. Extra discounts in Dec., Jan., and Feb., both wholesale and retail, on all kinds of Apiarian Supplies. Agents wanted. Send for circular. **E. T. LEWIS & CO.,**
12 5d **Toledo, O.**
Factory, 36 Monroe St.

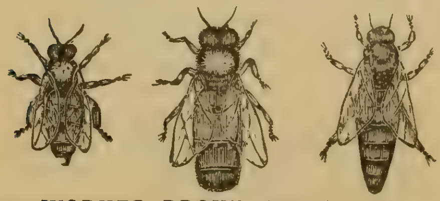
GEORGE W. BAKER,

—OF—

Lewisville, Henry Co., Ind.

is still breeding those fine Italian Queens whose progeny are wonderful honey-gatherers; also dealer in APIARIAN SUPPLIES, and breeder of nearly all of the finest breeds of Poultry. Also, eggs for sitting.

ELECTROTYPES.



WORKER, DRONE, AND QUEEN.

We can furnish electrotypes of above, all on one block, for the use of those who are getting up circulars, etc., for 40 cts. each. By mail, 3 cts. each extra.

A. I. ROOT, Medina, Ohio.

THE BEE-KEEPERS' HANDY BOOK.

216 pages, bound in cloth, by mail, post-paid, $1.00 per copy. Send for prospectus, and our special circulars describing three new and useful articles for the apiary.
11½-tfd HENRY ALLEY, Wenbam, Mass.

WANTED.

A man to take charge of my Hive Factory and Apiary — who understands the making of hives, etc., by steam, and management of a large apiary, and who is not afraid to work. Address at once,
12d **P. L. VIALLON, BAYOU GOULA, LA.**

WANTED.—A man competent to take charge of an apiary in Florida. Address
12d T. G. ASHMEAD, Jacksonville, Duvall Co., Fla.

MUTH'S
HONEY EXTRACTOR,

SQUARE GLASS HONEY JARS,
TIN BUCKETS, BEE HIVES,
HONEY SECTIONS, &c., &c.

Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send Stamp of 10c for "Practical Hints to Bee-keepers."

DON'T DO IT!

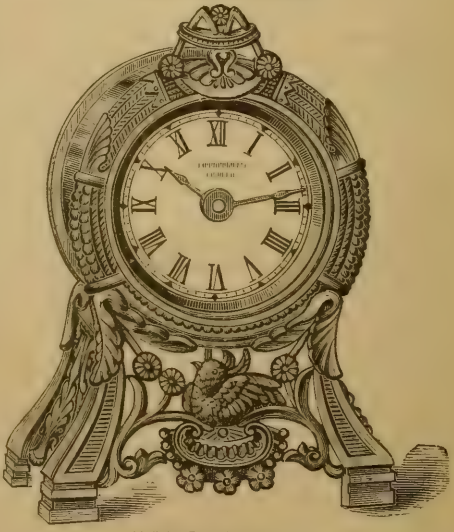
DON'T SELL YOUR HONEY at starvation prices, but send for some of my half-pound **Honey Tumblers, only $4.50 per gross,** and I will describe fully how I put up and sell thousands of pounds of comb and extracted honey at 20 to 25 cts. per lb. Send an order and learn how to double your money on your honey. Address,

JOHN A. BUCHANAN,
12tfd *Holliday's Cove, Hancock Co., W. Va.*

Recent Additions to the
COUNTER STORE.

Postage.]		[Pr. of 10,	of 100
	FIVE - CENT COUNTER.		
6	BRUSH, Scrub	45	4 00
5	KALEIDOSCOPE	45	4 25
3	BIRD-WHISTLE, china	45	4 25
2	LADLE, CREAM, for table use, nice	45	4 00
7	WAITER, 8x11, japanned	45	4 25
	TEN - CENT COUNTER.		
8	DOOR-BOLTS, bronzed	75	7 00
	TE-NEX-INE, a new and wonderfully adhesive liquid cement	90	8 50
	FIFTEEN - CENT COUNTER.		
4	PAPER, TOILET	1 25	10 50
	1000 sheets strung on a wire loop, size 4½x6½; a soft, tough, tissue paper, handy for a multitude of purposes.		
1	SILK CULTURE, a book of 29 pages	1 35	12 00
10	STRAINER, re-tinned	1 35	12 00
4	LAMP-SHADE HOLDER	1 25	11 00
	TWENTY-FIVE CENT COUNTER.		
16	MEASURE, gallon	20 00	18 00
15	WIRE FRUIT-BASKET	20 00	18 00
	With decorated china bottom, very pretty.		

$1.50 COUNTER.



"Little Beauty."

We thought we had as many clocks in our list of goods as we could spare room for. But we have been tempted to add the above, because it is so extremely pretty. In fact, its name is "Little Beauty." It is only 3½ inches high and 2½ broad. The case is gold bronze and nickel; and although it is so very small, it is a pendulum clock, and will keep time like a top. Price $1.50. By mail, 10 cts. more. If you want to make your little girl a present for her work-table or playhouse, just get her one of these clocks; and when she is gone to school, her mother may find it quite handy to keep where she happens to be at work. It is worth pretty nearly the price of it to see the children shout and crow at such a "teenty-taunty," real, live, going clock.

A. I. ROOT, Medina, O.

KIND WORDS FROM OUR CUSTOMERS.

The iron try-square is first-class for the money.
Bethel, Fairfield Co., Ct. GEO. H. FERRY.

BARNES' FOOT-POWER SAWS.

I received saw in due time, and it works like a charm. I am well pleased with it. I also received A B C; thanks for promptness. J. J. THIEROFF.
Defiance, O., Nov. 17, 1883.

MAILING QUEENS IN NOVEMBER.

The queen you mailed to my address Nov. 6, came to hand in fine condition in six days, with plenty of feed, and only one dead attendant bee.
H. C. MOORE.
Pin Oak, Fayette Co., Texas, Nov. 16, 1883.

The Muth honey-jars and corks are all O. K., only one jar broken in the lot. It is a pleasure to do business with you, always prompt, and goods in the best possible condition. Long may you wave to accommodate the bee-keepers, and bless your friends.
LEONIDAS CARSON.
Diamond, Portage Co., O., Nov. 20, 1883.

A B C arrived yesterday in perfect order. Accept my sincere thanks; the book is grand—much nicer than I thought it would be, although a gentleman said I would be surprised at it. He was encouraging me to buy all I wanted from you, as he considered you reliable and honest. MRS. S. W. KUSTER.
Lenard, Fla., Nov. 10, 1883.

FLAT-BOTTOM FDN., ETC.

The 18-lbs. of fdn. I bought of you last spring gave the best of satisfaction. We tried the Root fdn. and flat-bottom fdn., and the bees would draw out the Root fdn., fill it with honey, and seal it over, before they would touch the flat-bottom. WM. CRAIG.
Chesaning, Mich., Nov. 12, 1883.

The sprinkler, Smith's patent, came to hand tonight, and I have tried it, and certainly think it quite a success; am well pleased with it. The calendar clock for Browneller came all right, the third day after the order. Thanks for your promptness in filling all my orders, which has been very satisfacory to me. Best wishes to you and all of your many workers. W. H. FERGUSON.
Fostoria, O., Nov. 22, 1883.

THE JONES PAIL.

Pails came all right in about 10 days after being shipped; freight, about 1½c. apiece; have made some honey-stands to put pails on, and have put them in 3 stores. Everybody thinks they are daisies, as they are a new thing here, and go off like hot cakes at 45 cts. for 3-lb. and 30 cts. for 2-lb. pails. I shall have to make another order for more soon.
W. L. MILLER.
Chariton, Iowa, Nov. 24, 1883.

I can look to the Lord, and thank him that there is one heart in Medina that loves him, at least, and that stands fast against the flood of infidelity that is sweeping over the land. As to my attitude toward you, see Eph. 1:16, and then bear with me when I say, let your eye rest upon the 6th chapter, commencing at the 10th verse, to the 15th. I have often desired to say a word of encouragement to you, but after all it is the Lord only that can encourage and comfort his own; "having loved his own which is in the world, he loved them unto the end."
C. J. HARTT.
San Jacinto, San Diego Co., Cal., Oct. 13, 1883.

And now, my friend, let me simply say to you, that, since we have been reading your A B C and GLEANINGS in our home, we feel that we have formed a new and very pleasant acquaintance. We are glad we got acquainted with you. We like you; we like what you say about bees. We like the way in which you say it. You don't write, you just talk, and so that we can understand you. But, more than all, we enjoy you for your earnest Christianity, and for the sweet spirit of the Lord that lives and breathes in you. Lord bless you, my brother, and make you more and more a blessing to others.
ORVILLE CAMPTON.
Bennet, Neb., Oct. 16, 1883.

KIND WORDS FROM G. M. DOOLITTLE.

Friend Root:—I am very much pleased with my 1884 circular which you printed for me. The make-up of it shows that you work for your patrons' interest. It also shows that you know how to arrange poorly prepared manuscript so as to make it appear in "apple-pie" order. Thanks for doing so well for me on the 5000 copies printed. Truly yours,—
G. M. DOOLITTLE.
Borodino, Onondaga Co., N. Y., Dec. 1, 1883.

A CALIFORNIA BAND OF HOPE.

We have a Band of Hope in our little village. About half here are Spanish and Catholics, so we can not get any of them to attend; but we have nearly all the other children, 30 members. I see you give cards to children, suitable for such Bands. Please send us some, and we shall be much obliged. We sent to Mrs. Richardson for books, before we saw your kind offer, or we should have sent to you; but knowing your kind heart, and your great desire to help all to live a good life, I do not hesitate to ask for the things you so kindly offer free. Poor crops make us feel poor, or else we would send money for them. To make our Band interesting, I give premiums to those who get new members, and also to those who read and recite interesting pieces during the session. Any hints and helps from any or all will be received thankfully. We have 6 places here that sell liquors and tobacco, so we are anxious to keep the children away from those places, and to make our Band interesting and instructing.
MRS. J. HILTON.
Los Alamos, Santa Barbara Co., Cal.

AN ENTHUSIASTIC YOUNG FRIEND.

As I am head over heels excited in bees, and long so much to be a bee-man, I have often wondered what I was fully intended for. But at last I know. You have convinced me. About 8 weeks ago I saw an item in a Saginaw paper concerning you and bee culture. I had one little third swarm of bees, and somehow I loved them. I wrote you a card, and, to my great astonishment, you shipped me three little books—GLEANINGS and two others, these being the most interesting books I ever read, and the best, except that good old Book my mother bought me to read. There is something godly in bee business. I see by GLEANINGS it is better if a man never uses tobacco, for bees dislike it. Well, they surely do not dislike it more than I do. I believe bees know drunkards and wicked men in general, for they will sting drunkards, for I have seen them do so quite frequently when I lived in town. I have a box, and I am going to try to find me some bees, for I am not stocked with money, as I am young, and never had any income, so I have plenty of places for my money. I am trying to pay for a home for myself and parents. J. E. SPENCER.
Birch Run, Saginaw Co., Mich., Sept. 8, 1883.

Yours of 20th ult. was received four days ago, requesting me to tell you what it cost to rig up my mandrel in the way I suggested, and you would pay for it. Now, Bro. Root, I can not find it in my heart to take advantage of such a kind Christian spirit. It proves that you are a Christian, not only by profession, but in *spirit*, and that it does not lie slumbering on the shelf during the week, but that you take it right with you every day into your business. It is worth a couple of dollars to learn to know such a man. I will know now to whom it is *safest* to send for supplies. May our common Master bless you in your work! I am glad I learned, through the fore part of our correspondence, of the incompleteness of my A B C book. I mean to have one *complete*, and bound in cloth, as soon as my bees (9 colonies) will raise me the money, if they ever do. They are not "booming" just now, as some report. I work for section honey, and use L. hives. Do not erase my name from your subscribtion list for GLEANINGS on New Year's day, even if I do not have the money just then. I will scratch it up some way if I live. We *must* have GLEANINGS, especially the Home Papers. It has cheered me, and called forth many a tear and prayer while sitting in the old armchair, suffering, from the asthma and dyspepsia, on account of which I have not been able to work for nearly six years; not more than now and then a little at a time; very slowly, and light work. Mrs. B. attends to the bees the greater part of the time.
Dixon, Ill., Aug. 13, 1883. J. F. BOSSEMEYER.

CONVENTION NOTICES.

The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., Jan. 8, 1884. N. C. BEAN, *Sec'y*.
McGrawville, Cortland Co., N. Y., Nov. 23, 1883.

The 5th annual convention of the N. E Ohio and N. W. Pennsylvania Bee-Keepers' Association will be held in Jefferson, O., on Wednesday and Thursday, Jan. 16 and 17, 1884. C. H. COON, *Sec'y*.

The Bee-Keepers' Association of Central Illinois will meet in Bloomington, Ill., Jan. 9, 1884. You are cordially invited to attend.
JAMES POINDEXTER, Secretary.

The annual meeting of the Indiana bee keepers will be held at Indianapolis, Jan. 15 and 16, in the Agricultural Rooms, corner Tennessee and Market streets. A cordial invitation is extended to all.
F. L. DOUGHERTY, Secretary.

The North-Western Illinois and South-Western Wisconsin Bee-Keepers' Association will hold their annual meeting in Temperance Hall, in Freeport, on the 15th and 16th days of January, A. D. 1884.
J. STEWART, *Secretary*.
Rock Falls, Ill., Nov. 30, 1883.

THE NORTH-EASTERN CONVENTION.

The fifteenth annual convention of the North-Eastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 22d, 23d, and 24th days of January, 1884. This will be the largest and most interesting convention of bee-keepers ever held in America. Many of the most scientific apiarists in the country will take part in the discussions. The programme is completed, and comprises all the important topics of the day. The question-box will be opened each day, and the questions answered; all are invited to send in questions. Implements and other articles of interest for exhibition will be received and properly arranged. It will pay any bee-keeper to go a thousand miles to listen to the discussions by America's most eminent apiarists. By hearing and seeing, you will obtain much more knowledge than by reading; 500 bee-keepers are expected to be in attendance. Reduced rates of board at hotels have been secured. All are invited. W. E. CLARK, Pres.
GEO. W. HOUSE, Sec.

NEBRASKA STATE BEE-KEEPERS' ASSOCIATION.

Notice is hereby given, that the Nebraska State Bee-Keepers' Association will meet in annual session at Lincoln, Neb., Wednesday, Jan. 9, 1884, at 2 o'clock P. M., in the Y. M. C. A. rooms, on Tenth street, between O. and P., just east of the Government Square.

We have the promise of some eminent apiarists from other States to be with us, and also expect to have one of the largest displays of apiarian supplies ever gathered together in the State. Each person attending is requested to bring something to exhibit or show, to the edification of bee-keepers and others.

Past members are earnestly requested to renew their membership, and all others cordially invited to come in with us. The ladies having been well represented at our past meetings, we certainly expect a larger attendance this session than ever before. All those not attending will surely miss a good time, for we expect the largest gathering, and also the most enthusiastic meeting of practical bee-keepers ever held west of the Mississippi River. We have succeeded in making very satisfactory hotel arrangements, two-dollar hotels having offered one-dollar rates. All bee-keepers desiring to attend can obtain certificates entitling them to excursion rates over the B. & M. and U. P. railroads by applying at any time previous to Jan. 6, to M. L. Trester, Secretary Nebraska State Bee-Keepers' Association, Greenwood. Please apply immediately.
T. L. VANDORN, President.
M. L. TRESTER, Secretary.

Basswood Sprouts,

FROM 8 TO 15 INCHES HIGH.

$1.50 per hundred; **$10.00** per thousand. All orders should be in before March 1st, 1884, to receive attention.
HENRY WIRTH, BORODINO, N. Y.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

NEW YORK.—*Honey.*—Permit us to state, our market is heavily stocked with comb honey, which has accumulated during the warm season, and prices have yielded a trifle; the present outlook, however, assures us of renewed activity, particularly in comb honey. The following prices are obtainable:

Fancy white-clover in 1-lb. sect's, no glass,	18 @20
Fair to good " " " " " "	16 @17
Fancy white-clover in 2-lb. sect's, glassed,	17 @17½
Fair to good " " " " "	15 @16
Fancy buckwheat " 1-lb. " no glass,	15 @16
Fancy " " 2-lb. " glassed,	13½@14
Ordinary grades, " 2-lb. "	12
Ext'd honey, best white-clover, in kegs or small bbls.,	9½@10
" " " buckwheat, " "	8½@ 9
Beeswax, prime yellow	33 @35

Dec. 15, 1883. MCCAUL & HILDRETH,
80 Hudson Street, New York.

CLEVELAND.—*Honey.*—Honey continues in very good demand for best white 1-lb. sections, for which 18 cts. is readily obtained; 2-lbs. are not so active at 16, but still choice lots sell at that. Second quality is dull at 14 to 15, and dark would not bring over 12½. Extracted is no sale.

Beeswax scarce, and wanted at 28 cts.
Dec. 12, 1883. A. C. KENDEL,
115 Ontario St., Cleveland, O.

CINCINNATI.—*Honey.*—No new feature in the honey market. The demand is improving for extracted honey; but arrivals being plentiful, prices keep low. Arrivals of comb honey are fair, and keep about pace with the demand. It brings 14@18 c. on arrival. Extracted, 7@9 c. There is a good demand for beeswax at 30@32 c. on arrival. C. F. MUTH,
Dec. 11, 1883. 976 Central Ave., Cincinnati, O.

CHICAGO.—*Honey.*—Market is without special change. Dealers buy enough to supply their immediate needs. Few, if any, buy more than will carry them through the week at a time. I quote white comb, 1-lb. sections, at 18@20c; 1½ to 2 lb. sections, same grades, 16@18c. Extracted, steady at 8@10c per lb., according to color, body, and flavor.

Beeswax.—Yellow, 33c.; medium, 28@30c.; offerings small. R. A. BURNETT,
Dec. 10, 1883. 161 South Water St., Chicago, Ill.

NEW YORK.—*Honey.*—Market is dull, and sales have fallen off to a certain extent. Wholesale dealers and jobbers do not buy such large quantities as last year, but purchase small lots to supply the demand. However, we quote same as in our last issue, but shall probably make a reduction in price soon. *Beeswax* is very scarce, and in good demand at 33@34c. H. K. & F. B. THURBER & CO.,
Dec. 10, 1883. Reade & Hudson Sts., N. Y.

DETROIT.—*Honey.*—The honey market is not very active, though the demand is steady — prices ranging from 18@20 cts.

Beeswax, scarce at 30 cts. A. B. WEED,
Dec. 13, 1883. Detroit, Mich.

BOSTON.—*Honey.*—Two-lb. sections, 16@18; 1-lb., 18@20c; Extracted, 10c. BLAKE & RIPLEY,
Dec. 10, 1883. 57 Chatham St., Boston, Mass.

We have 1000 lbs. clover and basswood honey, for which I will take 10c per lb. delivered on board cars here, barrels thrown in. F. W. STEVENS.
Moore's Hill, Dearborn Co., Ind.

I have for sale 1500 lbs. good basswood honey, in barrels of 300 to 500 lbs. each.
Berne, Ind. SPRUNGER BROS. & CO.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES, HONEY & HOME INTERESTS.

Vol. XI. **DEC. 15, 1883.** **No. 12.**

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 5 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

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VIRGIL'S TREATISE ON BEES.

Continued.

UPON finishing the account of the spontaneous production of swarms, the transition from practical science to popular mythology is accomplished by asking who first taught this wonderful art of producing bees. It was Aristæus, already alluded to as the "wise Arcadian," grandson of Jupiter, and son of Apollo. His mother, as the fables run on, was Cyrene, who was a nymph; that is to say, a creature not exactly human, but very humanlike, and that lives in the water instead of on the land. Cyrene was a sort of princess among nymphs, and had a large retinue of other nymphs around her. She lived in the river Peneus, in Greece. Well, Aristæus was a famous bee-keeper; and it came to pass in the process of time that the powers above took vengeance upon him, and destroyed his apiary. He didn't know that he had done any thing especially wicked, and was puzzled to know why he should be punished so. In distress and bewilderment he went to the river in which his mother lived, and stood there crying, and making complaints, and charging his trouble to her, and peevishly telling her to go on and do all other imaginable bad things to him.

This sort of thing is much older than Virgil's time. It is found in Homer, and is no doubt a faithful reflection of the Greek character, both ancient and modern — passionate, excitable, and unreasonable to the last degree. But, of all things, what do you suppose the nymphs were doing meantime, down there fifty feet under water? Why, they were carding and spinning wool! After awhile they thought they heard something above, and one of them popped her head up out of the water to see what was going on. Returning, she told Cyrene that her son was up there,—

"Upbraiding heaven, from whence his lineage came,
And cruel calls the gods, and cruel thee, by name."
—*Dryden's Version.*

Cyrene thereupon waved her hand, and the waters retired to the right hand and the left, and stood on either side, making a path for Aristæus to come down and visit her. But Cyrene didn't know, any more than Aristæus did, what the bees were destroyed for. She was sure Proteus would know about it—

"With sure foresight, and with unerring doom,
He sees what is, and was, and is to come.
This Neptune gave him, when he gave to keep
His scaly flocks, that graze the watery deep."
—*Dryden's Version.*

And so to Proteus they must go. Proteus was a chief among water divinities, keeper of the fishes, etc., to Neptune — a prophet, and a very queer chap generally. Cyrene promised to do what she could to help her son, and to go with him as a guide; but to get any thing out of Proteus was a fearful task. That personage was of a very contrary disposition, paid no heed whatever to prayers, was not in the least susceptible to flattery and "soft sawder," and cared not a fig for any presents or bribes that could be brought. The only thing to be done was to catch him asleep, and seize him, and hang on like grim death until he told you what you wanted to know. Although the idea seems strange, it is worth considering whether we have not here, in disguise, one of the doctrines of the gospel: "The kingdom of heaven suffereth violence, and the violent take it by force." To return to Proteus, his muscular power seems to have been very moderate for a supernatural being, but he had the power to put on the appearance of any imaginable thing or creature. His would-be captor would suddenly find himself holding a great blazing fire, or a terrible serpent, or a roaring lion. The power to burn or bite or sting did not come with these tricks; but the object was to frighten the assailant, and make him let go for just an instant. When there was no longer any hope of escaping, Proteus would take his own proper shape, and come to terms. It may have occurred to some boy or girl that the best plan for Proteus would be to tell a pack of cunning lies, and send his intruders away badly fooled. *Proteus was pretty mean, but he was never mean enough to tell lies.*

To make sure that her son would have strength enough for the encounter, Cyrene anoints him with nectar, and then they set forth for the haunt of Proteus. The locality is prettily described. The hour when he could most frequently be found asleep was noon; and, by good fortune, the day on which they made their attempt was an unusually hot one. We think we have some pretty hot days in our country, but we might as well hush up about it.—

"'Twas noon; the sultry Dog-star from the sky
Scorched Indian swains; the rivelled grass was dry;
The sun with flaming arrows pierced the flood,
And, darting to the bottom, baked the mud."
—*Dryden's Version.*

Never, dear Dryden, saw we day like that.
Sweet classic bard of England, here's our hat.

The passage I have chosen for translation begins at this place, and runs as follows:

A DOG-DAY NOON.

Now blazing Sirius, from his heavenly seat
Scorched thirsty Hindoos with unwonted heat;
The fiery sun that fierce and sweltering day
Had fairly drank his orbit middle way.
Herbs withered; and the narrowing throats of streams
More empty grew in the relentless beams
That grilled the scanty remnants of their flood
Into a lukewarm broth of fluid mud.

PROTEUS UNSUSPECTING.

Then Proteus, seeking his accustomed caves,
Went home from pasture on the flowing waves;
Tribes of the deep, exulting round him play,
And sprinkle all abroad the bitter spray;
And sea-calves, here and there upon the shore,
Recline and stretch their limbs for sleep once more.
He, as a shepherd oft upon his mount,
Sits on a rock, their numbers to recount,
When evening from the pasture-range recalls
The flocks and herds to home's protecting walls,
And wolves meantime are lurking near unseen,
While lambs with bleatings whet their hunger keen.

PROTEUS CAUGHT.

An offered chance of seizure quickly came;
For scarce to rest his weary, aged frame
The prophet thoughtless sank upon his bed,
When with loud shoutings Aristæus sped,
Took swift advantage of his lying low,
And added fetters to a baffled foe.
But Proteus also, on the other part,
Was not unmindful of his usual art;
In all his startling miracles of ways
He swifts transforms himself, a fiery blaze;
A horrible wild beast anon he seems;
Anon he feigneth gentle, gliding streams.
But when no tricks availed to win him flight,
Conquered at length, he showed himself aright;
Speaking with mouth of man, a talk he led —
"Who gave you, most audacious youth," he said,
"This bold permission slyly to draw near,
And violate our homes? what seek you here?"

One more article will finish up the job, and close a subject which will then have been running in GLEANINGS for a month over a year. The riddle of why the bees were destroyed, and how Aristæus could be guilty of murder and he not know any thing about it, will be solved. The sacrifices will be offered, and a swarm of spontaneous bees restored. Every thing will be fixed up, except the sad and irreparable case of twice-lost Eurydice and murdered Orpheus. **E. E. HASTY.**

Richards, Lucas Co., O., Dec. 7, 1883.

Friend Hasty, I am very much obliged to you for the text you ran on to in your searches with Virgil; for the text you quote sums up the substance of what has been in my mind for many days past—that not only are all good things this world furnishes ready for those whose energy and zeal almost approach violence, but even the kingdom of heaven as well, is in store for those who take it by force. You will recollect, that in the Home Papers I talk some of importunity; and now it seems that old Proteus was to be conquered and made to yield up his great gifts by fearless faith and importunity.

PERFORATED ZINC.

IS IT A SUCCESS?

WHILE at the North-Eastern Bee-Keepers' Convention last February, friend D. A. Jones there told us of his plans of using the perforated zinc when working for comb honey, one of which was as follows: The frames of brood, bees, and all, were to be taken from an ordinary hive, and placed in a long hive (similar to the Adair "Long Idea" hive), a little while before the swarming season arrived; and as soon as the honey season came, a close-fitting division-board made of the above zinc was to be so inserted that 3 or 4 frames of comb could be placed between this division-board and the front end of the hive. Next the frame having the queen on was to be placed over in this small partitioned-off part of the hive, together with two or three frames of hatching brood taken from among the other combs in the same hive. At the same time, broad frames of sections were to be placed next the perforated division-board, with the separators on them toward the back end of the hive. The remaining frames of brood were then moved up to the wide frames, and an ordinary division-board placed behind them. The object of the above was to get our comb honey built in the center of the brood-nest, instead of at the outside of it, as had formerly been done. Friend Jones told us how quickly foundation in the sections would be drawn out in this way, even when little or no honey was coming from the field; how in this way the bees did not get the swarming fever, and how rich, and of what good flavor the honey produced in this way was, as it would be so well ripened. In fact, he pictured the thing so nicely that I became enchanted with it. The only trouble I saw with it was that it required so much work; for to carry out the plan, the three frames placed in the front part of the hive were to be taken out at the end of one week, and placed immediately behind the wide frames, and three other frames of hatching brood placed in front with the queen. At the end of another week these frames in turn were to be taken out and placed next the wide frames of sections, and the remaining 3 frames placed in front. Thus it will be seen that the queen had the same laying room she would have had in a whole hive of 9 frames; for with the next change she would have the 3 frames she had laid in 3 weeks before; and as all the bees would hatch out in order as she laid the eggs three weeks previously, she could fill three frames solid with brood every week, instead of scattering it among 9 frames. As the honey-harvest advanced, more wide frames of sections were to be inserted as the bees gained in strength, by moving the 6 frames of brood back, and thus all hands were kept eagerly at work to fill up *that vacant space* in the center of the brood-chamber. The result was *piles* of section honey, and no disposition to swarm. The whole thing looked so reasonable that I decided to try the plan, no matter how much labor it took. Consequently I bought a large sheet of perforated zinc, made the necessary hives, and closely followed the *modus operandi*. As very little honey was coming in, I was in shape to test the idea about the drawing-out of the fdn. in the sections; and the first thing that cooled my ardor was, that the bees did not touch the fdn., only to eat it up, till considerable honey came in from the fields. In fact, they would not touch the fdn. to draw it out till they got honey enough to build bits of comb here and there. But this part I almost expected, as I had always failed to get bees to work fdn., unless they were getting honey quite freely from some source.

When one week had passed I went to the hives to change the brood, according to Mr. Jones's direction. Imagine my surprise to find nearly capped queen-cells on the first frame I lifted at the rear of the sections; for one of the most valuable things to me about the whole matter was, that the bees would not swarm when worked on this plan. However, little daunted I carefully cut all queen-cells off and changed the brood as given, in all except one which I left as an experiment. This one swarmed when the first queen-cells were sealed, as all good swarms do. The next week all the others swarmed, all of which were allowed their own way, except one which I was determined should stay till I saw what became of the experiment.

At the end of the third week there came a little honey, enough so the fdn. in the sections was drawn out about ½ inch on each side; and I hoped by the 4th week to find them filled with honey. When next I opened the hive I was quite indignant when I found every section filled nearly solid with pollen; and as the bees kept swarming, I gave the whole thing up in disgust.

Now, in all sincerity I ask friend Jones to come forward and tell us in these pages how it is that he succeeds with the plan, and what part of it I left out (if any), which turned his success into my utter failure. One other thing: Wherever I have used the perforated zinc so as to separate the brood, that brood excluded from the queen was sure to have queen-cells formed upon it, thus either causing a supersedure of the queen or a swarm, both of which were a positive disadvantage when a good queen was in the hive. Again, if no brood was placed in the upper story, the bees would swarm from extracting hives, the same as from those worked for section honey; hence the zinc was of more disadvantage than the allowing of the queen the privilege of the whole hive.

From all of the above, the perforated zinc has not been a success with me. Will those who have made it a success tell us of the fact, and how they managed to do away with the above difficulties?

G. M. DOOLITTLE.

P. S. — Since writing the above I have read Mr. Benton's article, "Queens Across the Atlantic by Mail," in Dec. GLEANINGS, and notice that he says, in speaking of his cages, "of which Mr. Doolittle's cage is nothing more nor less than a copy." Gently, friend B. I never saw more than one number of the *British Bee Journal* in my life, and that before you went to the Old World; neither did I know that you were trying to mail queens across the Atlantic, till I saw a notice of it in King's *Magazine*, after I had mailed the one to Scotland. I sent the queen to Mr. Cameron at his request, and in a cage so made and provisioned as my own judgment taught me would be most likely to succeed; hence I copied nothing from any one. G. M. D.

Borodino, N. Y., Dec. 7, 1883.

Friend D., we should be sorry to have any thing come up that looked the least bit like uncharitableness between two such public benefactors as you and our friend D. A. Jones, and doubtless others can give their experience with perforated zinc so as to throw light on the matter.—As I understood it, friend Benton only meant to say you had *unconsciously* copied his cage.

SENDING QUEENS BY MAIL ACROSS THE OCEAN.

ONE OF THE MOST IMPORTANT MATTERS NOW BEFORE THE BEE KEEPERS OF AMERICA.

DEAR FRIENDS, in the outset of this article I have got to make a confession, and a very humiliating one too. In moving from our old office into the new one, I ran across the letter below, from our friend Frank Benton. It was evidently misplaced as soon as it was taken from the mail, for I have no recollection of having seen any thing of the sort, and the clerks do our work so systematically that I am compelled to think I must have had the article in my hands, and mislaid it. I am almost ashamed to ask friend Benton to overlook my carelessness, and I think I shall feel better after placing to his credit the sum of $25.00 as a small expression of my regret. The article must have reached us some time in September. Of course, nothing can be done about it now, until warm weather; but I think it important that the facts therein laid down should be before the friends as soon as possible.

WHO WANTS TO GAIN A TRIUMPH, AND AN IMPORTED QUEEN OF ANY RACE?

First Offer.

The undersigned will send a choice imported Carniolan queen, or a choice imported Italian queen, to Mr. I. R. Good, Mr. Paul L. Viallon, or "any other man"—yes, the lady bee-friends are also included, who will send from America to the address given below, by mail, postpaid, three boxes containing live bees of any race whatever, and with or without queens, provided the contents of two out of the three boxes sent may be said to have arrived in *fair order*. The only limitations will be as follows: Each party shall have but one trial; the mailing-cages may be of any pattern, except that employed by me, and the food of any sort, except that which I am now employing. (So far as I am aware, neither the cage nor the food used by me is employed by any one else, either at home or abroad.) When ten persons have successfully met these requirements, I shall say "quit."

The queens which I propose to send in return may be had this fall, or early next spring; will be choice ones imported from the apiaries of noted breeders of the race desired; will be sent prepaid as far as New York City at least; and in case the first one sent out to any successful competitor fails to reach him in fair order, a second one (prepaid to New York at least) will be forwarded. I am to have the right to make a report for publication, regarding all lots received. Should any party not wish his name to appear in connection with the matter (until he meets with success! eh?) he may put initials, figures, or signs of any sort, on his boxes, instead of his name, but must then write, *at the time he sends the bees*, to the editor of some bee-journal, giving the mark of his box, and his full address.

Second Offer.

To any one who sends me from America by mail, postpaid, five cages of live bees, three of which shall arrive in *good order*, I will send a choice queen, imported from Cyprus, from Palestine, or from Syria. When five persons have succeeded under this offer, I shall want the rest to content themselves with merely an "honorable mention." All other conditions the same as preceding offer.

HINTS TO COMPETITORS.

Cyprian and Syrian bees will stand a longer journey, and better, than any others. I think bees *with* queens will be more likely to arrive in good order than those *without queens*. Mere death of a queen need not necessarily cause the rejection of a box — more will depend on the condition of the workers and the box. Such packets are here classed as "samples" by the postal authorities, and will be rejected by the latter if over 8 in. long, 4 in. wide, and 2 in. high. From New York "via Bremen" or "via Havre" are the only advisable routes for unregistered cages of bees. "Via Hamburg" usually takes longer. Letters mailed east of the Mississippi reach us in 12 to 20 days — *usually* about 15 or 16 days. I think some of the fast steamers to England would bring the time down to 10 or 12 days from New York to Munich; but if sent by any mail to England the cages should be registered, in order that English postoffice officials may not have the grim satisfaction of notifying me that a packet addressed to me had been detained in London, and would be delivered to me in person at that office within two weeks, which interesting trick they once played on parties in America to whom I had addressed packages of bees; also, these same officious gentlemen are to be kept, through the registering of these packages, from arresting and returning the latter, after five or six weeks, as they once did over 45 Syrian queens I had mailed in Beyrout, Syria. *Registered* packages *can not* be stopped in England, and no addition dare be made to the postage. Since I learned this quirk I have sent all queens to England by mail without difficulty, and without losses. Another point would be to ascertain the exact time of sailing of the mail steamers from New York, and to mail queens just in time to be sure to catch it. I have no earthly use for the queens I may get in this manner, so I can pay nothing for them; and I would advise all who try, to pick out the blackest, runtiest, and crossest hybrids. Unfortunately, old queens do not stand journeying well, else they would be just the ones to use for such experiments, and they would no doubt like very well to retire from business, and take a pleasure-trip to Europe. Let's see who has the *Goodest* candy in America.

Yours, "mit freundlichem Imker-grüss" (with friendly bee-keeper's greeting), as German bee-masters say to each other. **FRANK BENTON.**

No. 4 Georgen St., Munich, Germany,
Aug. 9, 1883.

BANISHING BEES BY AN ACT OF THE LEGISLATURE.

A MATTER THAT MAY POSSIBLY NEED LOOKING AFTER.

I INCLOSE you marked copy of the Monmouth *Democrat*, containing notice of an application to be made to the next Legislature of our State, virtually to drive the honey industry out of this County.

NOTICE IS HEREBY GIVEN, that application will be made to the next Legislature of the State of New Jersey, for the passage of a bill in and for the County of Monmouth; that the object of said bill is for the enactment of a special law in and for the said County of Monmouth to prevent injury or damage to live stock, by keeping or allowing to be kept, any nest or hive, or other receptacles for insects capable of stinging such live stock, within five hundred yards of the field, yard, pen, or other place in which such live stock is or are kept, and that said law may be enforced either by a penalty to be therein expressed, or by making the violation thereof a misdemeanor. A. V. CONOVER.
Dated Dec. 5, 1883.

Being the pioneer of practical apiculture in this section, I think it my duty to call the attention of my brother apiarists through this State especially, to the move that has been set on foot. You will observe, the writer of the notice speaks of "a special law in and for the said County of Monmouth." This legislation for special localities is, however, prevented, I think, by an amendment to the constitution, which forbids the enactment of laws other than general ones, affecting the whole State alike.

I have no fear, if the bill goes before the house in that shape; but as it will be impossible to obtain a copy of the bill till after it has been presented to the Legislature, and it is possible it will be presented in a way covering the whole State, I suggest to the bee-keepers of New Jersey to inform the members from their respective districts of the disastrous effects, not only to the honey industry, which is no small item, but to the fact of the loss of fruit and berries, and even clover and grass seed, if such a bill should be passed. It would be to the farmer a loss incalculable—just this loss of the bees as flower-fertilizers — thus a loss to the State, directly and indirectly. It is hardly possible that the members (being mostly men elected from the ranks of our farmers, and those interested in agricultural pursuits) will give the bill more than a passing notice; but by some hook or crook it might be lobbied through, for want of definite knowledge on the subject.

The whole thing is a personal matter between this A. V. Conover and his neighbor, a Mr. Frey, an elderly gentleman who through me started in modern apiculture; and with his small apiary of thirty or thirty-five colonies of gentle Italians, and Mr. Conover's fears that "they might do him harm," is the whole thing on which he is acting. If any one wishes to communicate to me in regard to the matter I will willingly reply to all questions relative thereto. F. C. LOCKWOOD.

Freehold, Mon. Co., N. J., Dec. 7, 1883.

To be sure, friend L., we wish to prevent any such hasty action which might result from the fact that bee culture is in many places a comparatively new industry. Any well-informed person would be likely to pronounce the above notice the result of ignorance and spite, on first reading it. Still, as ignorance and spite do a considerable amount of harm, your suggestions may be timely. It seems to me that the proper thing to do would be to refer the whole matter to some disinterested friend of both parties, who is well posted in the matter, and explain the case to Mr. C., and endeavor to have him see the mistake he is making. People sometimes get to be greatly embittered toward certain things; and although well meaning as a general thing, they may, as in this particular case, labor under a great misapprehension.

REPORT FROM HENRY WIRTH.

ANOTHER GOOD REPORT FROM DOOLITTLE'S NEIGHBORHOOD.

ONE year ago I sent you my report for 1882. There was considerable comment made in regard to it. I now come again; and what I have to say in regard to my bees this year I will vouch for and can bring any necessary number of good creditable vouchers, as to the facts herein. I went in winter quarters in 1882 with twenty-five colonies, and wintered them on their summer stands (which I shall do again this winter). I saved from the 25 colonies, 18—10 fair and 8 very weak ones. I rented 2 colonies of a neighbor; paid $10.00 for the use of them; took 3 colonies of another neighbor on shares, to give one-half the product. I took no honey from the 8 weak colonies, leaving me 13½ colonies from which I got all of my honey. I built up the weak ones, and increased from all of my colonies except 3, which were too weak to start a swarm. I go into winter quarters with 34 colonies, and with 3 that I got out of the woods this fall where other parties cut the trees and got the honey. The product from the 13½ colonies was 2936 lbs.; 1400 lbs. of comb, and 1536 lbs. of extracted; got 14, 15, and 16 cts. per lb. for my comb, and 10 cts. for my extracted at wholesale, giving me for my honey $363.60.

The season has been a very remarkable one, the most of the time quite wet, which, according to all writers upon the subject, is very bad for honey-producing. The first basswood that I got was about July 14. The basswood yielded honey for about five weeks. Then I got no more honey; in fact, if it had not been for the basswood there would have been nearly, if not quite, a honey famine.

Now, Mr. Editor, I have condensed, not taking up any of your valuable room with botanizing or any other subject foreign to the facts. I would say to you and the readers of your valuable periodical, that I am satisfied with my year's labor among my bees, as I think all apiarians in this section are, without a single exception, as far as my knowledge extends. HENRY WIRTH.

Borodino, N. Y., Dec. 4, 1883.

Friend W., we are very much obliged for your report, especially as it comes from the neighborhood of friend Doolittle, and we should be glad to hear from every bee-man you refer to, who, you say, have also done well. You have given us a very important fact in regard to the length of time basswood may yield honey. The longest period we have ever known here was about three weeks, while you put it at five weeks. I presume this extra two weeks is from the basswood located on hill-tops, and blossoming that much later. Now, friend W., may I inquire why you speak as you do, where you mention "botanizing"? and in one other place you speak as if you thought there was somebody unfriendly around. I supposed we were all a neighborly, good-natured sort of people; and if we have not been in your case, we will try to do better. I do not think any vouchers are needed for a straightforward report like the one you have given.

SELLING HONEY IN TUMBLERS.

SOMETHING FURTHER IN REGARD TO THE MATTER.

IN your foot-notes to my article in Dec. No., you say that, in your experience with chunk honey in Mason jars surrounded with liquid honey, that "all went well until cold weather, and then the honey all candied, and this finished up the trade."

Now, I am not surprised at this when you say you used so large a package as the Mason jar. You are aware that goods in small packages sell more readily than when put up in large packages; and you found it slow sale, and it had plenty of time to candy before a customer could be found to take 3 lbs. at a time. Years ago I tried selling honey in three-pound jars, and it was slow, and I soon gave it up; but honey put up in ½-lb. tumblers is a different thing entirely, and I never find it on the retailer's hands long enough to candy. When put up in ½-lb. flint-glass tumblers, as we do, and neatly labeled, I find honey sells ten times faster than in any other shape it can be put on the market.

You speak of your litile glass pails as perhaps some better than the tumblers. This may be; but they cost too much, and are no more desirable for subsequent use to the purchaser than the half-pound tumblers. Your package must be as cheap as possible, but yet look well; otherwise there will be a loss to some one; and further, if you would have your honey sell quickly at the best prices you must use tumblers holding no more than half a pound of honey.

I furnish my retailers with tin trays. These trays, or pans, hold from one to two dozen tumblers; are easily kept clean; they can be made plain or ornamental; they can be made of nicely grained hard wood by any one. The advantages of this method of selling are many. Your extracted honey may be sold at the same price that comb honey will bring, also all broken pieces of comb honey, honey in large boxes that can not be sold for its value in any other way. You need no section boxes, no wide frames, crates, separators, and many other expensive fixtures. The honey may be built in any large boxes where all the bees can work naturally and to the best advantage, thereby securing more honey by far than ever can be had by the use of sections, separators, and all these costly arrangements, that must come from either the bee-keeper or the purchaser of his honey.

I see honey put up in 2-lb. sections glassed that is selling very slowly at 25 cts. per lb., or 50 cts. for the package, and there is one-fourth loss to consumer in weight of glass and wood; the package, unlike the tumblers, is a clear loss to the consumer. He can neither sell nor make use of it. I am glad to see that consumers of honey are learning to give this glassed honey the go-by.

JOHN A. BUCHANAN.

Holliday's Cove, W. Va.

KEEPING BEES IN SEPARATE APIARIES.

ALSO SOMETHING ABOUT RATES FOR SHIPPING EXTRACTED HONEY.

WE went into winter quarters one year ago with 295 colonies of bees, in 4 apiaries, or yards, as we call them, all out of doors. They were reduced in the spring to 211, mostly by swarming out in April. And just here let me say a word in favor of double-walled hives, stuffed with chaff. Out of the 85 lost, only 2 were in the chaff hives, and we had 80 colonies in them. They were in 2 yards. We did not see much difference with the blacks and Italians — losses about equal, other things considered.

We started another yard last spring, making 5 in all; ran them all for extracted honey. All were worked by the same set of hands, going with a team from 4 to 9 miles to work, and coming home at night with our honey. We extracted every 8 days, as nearly as we could. Commenced June 16th at home. Extracted all 4 times; quit July 25th, but did not take out much after July 19th. It rained then every day for a week. The basswood had just opened; but it was so wet we did not get any surplus from it. The bees made their winter supply from it between showers. We increased to a little over 300 colonies by artificial division. Our bees are part Italians and part blacks, or brown bees. We weighed all the honey as it was brought in, and each yard got credit for all the honey we got from it.

NAME.	NO. AND KIND.	NO. LBS.	AVERAGE.
Home Yard	60 Italians	7648	128 4-16
No. 2 Yard	35, all blacks	4308	123 3-35
No. 3 Yard	48, " "	3349	69 47-48
No. 4 Yard	33, mixed It. and bl	3158	96 22-33
No. 5 Yard	35, " " " "	3596	102 26-35
Total,	211	22,059	104½

We have sold about half of the honey, and the demand is getting better all the time. We sold 4700 lbs. at 7 cts. per lb., barrels returned, to a cracker factory. That included all of our first extracting and dark honey, and a lot of old dark honey that we had on hand, some of it 2 or 3 years old. Our home market takes about 10,000 lbs. a year. I sell at 10 cts. per lb.; $9.50 per 100 lbs.; 9 cts per lb. by the barrel. Barrels hold 360 lbs. Barrels and kegs to be paid for, or returned. We have sent honey to parties in Illinois, Indiana, Iowa, Nebraska, Dakota, and Nevada. We can do better selling in this way than we can to wholesale dealers.

FREIGHT ON HONEY.

There is one thing about shipping extracted honey, that wants to be changed in some way; and that is, about the freight. I wrote to A. I. Root about the matter, and he printed what I had to say about it, in GLEANINGS, about bringing the matter before the American Bee-keepers' Convention, at Toronto. I guess he forgot it. It seems there are no rates of freight for extracted honey; and if it is shipped as honey, the rates are first-class—about twice as much as it is on molasses or syrup, which are 3d class. Our station agents, here allow us to ship our honey in kegs and barrels as "honey syrup," and gives us 3d class rates; but I don't like it. It doesn't look well, and is likely to injure the sale of extracted honey. Why, you see if I send a man a lot of honey marked "honey syrup," he opens up and goes to selling honey out of those barrels. Will his customers think they are getting pure honey out of those barrels marked syrup? Doubtful. The public are very much afraid of extracted honey, any way; and we don't want to do any thing to make them more so. Still, we want cheap freight; and honey in kegs and barrels should go as cheap as syrups.

Now, what can we do about it? I don't know that we can do any thing; but I do believe we can get rates on extracted honey as cheap as on molasses and syrups. Just how we can bring it about, I don't know; but if I were living about the railroad centers, I would have a talk with the bosses about it. I think if they were approached in a friendly spirit, and given to understand that the extracted-honey business is getting to be quite a trade, and that there is a great difference in handling extracted and comb honey, they would give us the same rates as on molasses or sugar syrups. My idea was to have our big bee-keepers' convention appoint a committee to talk with the railroad managers about it. I don't know how our other honey-producers feel about it, or how they ship their honey. We ship it as honey syrup, and get 3d-class rates; but, as I said before, I don't like that way of doing business. I should like to hear from others on this subject.

EDWIN FRANCE.

Platteville, Grant Co., Wis., Dec. 3, 1883.

We are glad to hear, friend F., that you have made a business success of having your bees kept in several different apiaries. It seems to me this is much better than trying to keep as many bees as you have, in one locality, or even two localities.—In regard to rates of freight on honey, our tariff places comb honey as first class, and honey in kegs or barrels at 3d class, which, it seems to me, is pretty nearly right. It is true, molasses in barrels goes at 6th class; but it is expressly stated that it goes at the owner's risk of leakage, and molasses is probably shipped in immense quantities over regular routes, while honey would have to be shipped from isolated points, as it were, a few barrels at a time, comparatively. We are very glad of your report.—We notice in your table that the home yard did the best. Now, was that because the locality was better, or was it because you gave them better care? I should guess the latter.

ARE THEY ITALIANS OR NOT?

WHAT ROOT SAYS.

Concluded.

I FEEL a great deal disposed to criticise friend Root in a rough, friendly way. The A B C book has all along been my chief text-book. During my first year, Root was my oracle; what "Root says" settled every question. But I think I have learned that roots are not always well grounded. Of course, friend Root does not claim to be infallible; but he does seem set in his notions; he does assert himself rather strongly, and he does seem to think that everybody ought to do every thing just about right. He has got possession of the idea—or the idea of him—that bees are gentle during a honey-flow, and get cross when it ceases. That is true, with some qualifications. A boy says, as published in the JUVENILE, that bees are good natured until they begin to get lots of honey, and then they get cross. Friend Root tells him he got that just wrong; that bees are good natured while they are getting honey, and become cross when they can not. Now, if Mr. Root's idea *is* right, the boy's is not wrong. My observation, and that of others, confirm what he said. Bees do get harder to manage, even during a good yield, when the hive becomes full of honey and bees —about what the boy meant. He tells A. how to avoid getting stung. "Use plenty of smoke, and never mash a bee." Friend Root, did you never mash a bee? In his directions for transferring occurs this phrase: "If you have not set your clumsy (?) foot upon a bee," etc., and other things to match. Friend Root, I should like to see you handle bees as you tell us to do. I will illustrate:

TRANSFERRING — AN EXPERIENCE.

In apple-blooming season, I was going to transfer my three box-hive colonies right away. Now was the time; Root said so. I went at it just as Root said. I turned the hive back, smoked the inmates well, pried off the side, and went to work. If I did not get the honey to running, and start robbers, I would not be apt to get stung. Root said so. Mother was there, fastening the combs into the frame as I cut them out. But, oh what a muss I did make of it! I soon got the honey to running; how could I help it? In ten minutes from the time I commenced, that scene was as pudding-like a mixture as you could well imagine. Although we were in the shade, we felt as if it were hot enough to cook the pudding too; hive and combs broken up into bits, honey running over every thing, bees blackening every thing, crawling over every thing; I straddling, tip-toeing and hopping around to avoid setting my clumsy *boots* upon a bee; bees swarming, buzzing, and stinging; two vessels smoking, two actors sweating, steaming, and fuming; every thing a boiling. I boiled over in the utterance. I should like to see Root transfer according to his directions, without setting *his* "clumsy foot upon a bee."

The absorbing question now was, how to get out of this seething muss. We hastily poked a lot of comb full of honey, bees and all, into the comb-bucket, for we could not get the latter off. I picked up the pieces as fast as I could find them, and galloped them off into the dooryard, leaving the bees behind as much as possible. We managed to worry almost all the brood comb into the frames, and run them into some hive or other, and poked the rest — honey, drone brood, bees, and all, into vessels. I daubed up sheets, trowels, and blankets in the effort to save all the bees I could, and keep them from the honey as much as possible. But they swarmed around and into the vessels until, in desperation, I would pick them up and run one into the smoke-house, another into the cellar, even carrying fragments of the old hive, and crowding them on to the cellar steps, blockading the entrance, to the great disgust and dismay of the women folks. I could not see, feel, nor swallow any thing but bees and honey all that day; bees crawling over yard, smoke-house, and cellar; bees drowning, poor drones hatching away off from home, folks in terror lest bees should sting them; one person shouting, "Take your bees away;" another, "George, you've got to get them things out of the way." It was a boiling dish indeed. I contracted the entrance to the new hive, and let the bees fight it out. I found about a quart of bees dead and scattered around the hive next morning. I was done with transferring then; also with transferring at all with the hives running over with bees; also with transferring right in the apiary right among the other bees.

One secret of the muss I made was the dearth of pasturage during fruit-bloom. My bees were on the rampage all spring. Another secret was my failure to do some things just right. Of course, I do not, friend Root, doubt that you have done such things *pretty nearly* as you say, but I should like to see you.

HOW I TRANSFERRED THE OTHER TWO.

I waited until white-clover season to transfer the other two colonies. One of them I swarmed by carrying the hive off to a new stand, and the next day I carried the hive into the door-yard, set it on a sheet of canvas, and transferred. With the third one I acted upon the simplest plan of all, in my opinion. It is that given by Mr. Heddon, as I read it in Mr. Flanagan's circular. I first swarmed them by drumming. Twenty-one days later I drummed the bees out again, moved the hive into the yard, and transferred. I had neither bees nor brood to bother me. I filled six frames with comb, nearly or quite empty; that which was full I put into the extractor, and used the comb at my leisure.

STRANGE EXPERIENCE WITH QUEENS IN UNITING.

I have had two, to me, curious experiences with queens. I united two colonies in August. One queen being very old I took her out and caged her. In spite of all my smoking, the bees fought, and a great many were killed. Three days afterward I looked into the hive. I found no cells, no queen, and only a few eggs in one comb. A few days later, I looked in again to find several frames filled with eggs and brood, and a queen. Later on, I united a nucleus containing one of my lately reared Italian queens, with a colony having an old black queen. I removed both queens, set the frames from the nucleus in the right, and those from the other stock in the left side of the new hive. Acting according to Flanagan's directions for introducing queens, I daubed the young queen with honey from the left side, and dropped her into the hive on that side. As in the first case, the bees fought for a day or two, more or less. The second day after uniting I looked in to find queen-cells in the right, with but few eggs. The queen had quite a dent in her abdomen, which I think I gave her. As I was looking for eggs I heard her crying on the other side of the comb. I looked around, saw the bees grabbing at her, and she struggling to get away. When trying to get her by the wings she crawled out on to my hand. Before I could get free use of the other hand she dropped off into the grass. Just as I touched her wings to pick her up she took wing and flew away. I sat down in front of the hive, and watched (except when I was nodding, for it was soon after dinner) for half an hour, but did not see her return. Two days later I looked again; found no cells, lots of eggs, and my dented queen. If the queen was balled in either case, I saw no sign of it. Now, were those queens balled? did the bees harrass them for so long, or did they voluntarily cease laying under the circumstances for a few days?

VALUABLE QUEENS.

I had two queens laying as late as Nov. 10. One of them batched in August. She is the offspring of an Italian queen hatched in June, which I have reason to believe was impurely mated, although she produced three-banded workers. The other hatched about Oct. 25, and the first platoons of brood are not drone either.

HOW LONG CAN BEES LIVE ON AIR?

In preparing a certain colony for winter, I must some way have shaken the queen out on the ground; for four days afterward, I think it was, I had occasion to set the hive off, when I found the queen and a lot of bees clustered to one of the bricks. I put her on the portico of the hive, to see how the bees would receive her. Before I, in my obtuseness, could be certain they were hostile, they gave her a death-stab. Injured as she was, I caged her in the hive, and brushed the benumbed bees — they would not shake off — into it. Although I gave them two good smokings, those that stayed at home, I suppose it was, killed off half of them. The weather was cold, and but few bees had been flying out. How long, I wonder, did it take those bees to lose the scent? Had they been fasting all that time? If so, how long can bees live without any thing to eat?

DOOLITTLE'S PLAN FOR RIPENING HONEY.

What is Doolittle's plan for ripening comb honey? Is it to let it be uncovered, or slightly covered in a thin-walled honey-house? Not having been a reader of GLEANINGS until this year, I am not acquainted with all the good things that have appeared in its columns. GEO. F. ROBBINS.

Mechanicsburg, O., Nov. 29, 1883.

Friend R., the trouble with the transferring was, you followed the letter of my directions, and not the spirit. If you will look again in the A B C book, I think you will find I gave, as a reason for recommending the time of fruit-bloom, that the bees were then gathering honey, and would not rob. Now, if your bees had been robbing right along as you say, and were not gathering honey the day you chose, you might have been sure there would have been trouble. I am glad you described the trouble you had, for it will be a useful lesson to others, in regard to doing such work as that when the bees are not busy. I would not advise, as a rule, waiting for white clover, for the hives would then be likely to contain so much honey that it would be seriously in the way of cutting combs, etc. — I entirely agree with you, that a colony of bees are very much more apt to be "bossy," and contest interference, when they are built up strong; but I think I am surely right in saying that bees can, as a rule, be handled without veil or smoke, when honey is coming in plentifully. Where there is no honey, it would be sometimes almost madness to attempt to handle bees without smoke. When bees are gathering honey every day, almost every bee in the hive has his body distended with honey — in fact, has honey glistening on the end of his tongue. In this state it is a pretty hard matter for them to sting, even if they would, while a bee whose body is short and light, looking as if he had not seen a square meal of honey for a week, is pretty apt to be ready to sting on short notice. Ask any old bee-man near you, who handles bees, if that is not his experience. In regard to transferring, great numbers of novices in the business have reported having transferred according to the directions in the A B C book, and yours was almost the first report of a failure where they had the book before them for a guide. — I do not see any thing unusual in the fact that the queen stopped laying for a day or two after being introduced to a new colony. — Queens reared late in the season will almost invariably lay late, and a cluster of bees driven out of their hive with their bodies filled with honey will live several days under the hive in the way you state. Are you sure none of them left the cluster, and gathered stores to bring in to their starving companions? I have several times found the queen with a few bees under the bottom-board, and that is one reason why I object to bottom-boards with any sort of a crevice or crack underneath them.— Doolittle's plan of ripening honey is to have a room so constructed as to be heated up by the rays of the sun until the honey in the open cells is evaporated to such a consistency that it will not run out, even when the combs are overturned. In this condition it will preserve its flavor, something as it does when capped by the bees.

SOUTH FLORIDA.

BY REV. JAMES H. WHITE.

THERE is a strip of land projecting from the main body southward between the Atlantic Ocean and the Gulf of Mexico, around which cluster many very remote historical associations, and toward which many inquiring eyes are turned.

Let the reader take the map and trace the Atlantic coast southward to Cape Canaveral. Here pause, and remember that, from this point southward to the Florida Keys, is the climatic paradise of the United States. Nowhere else within our national domain is there another region anywhere near its equal. The bogus South Florida of the land speculators extends so far north as to include the regions of New Smyrna, Daytona, DeLand, Sanford, Leesburg, and Brookville. All these places claim to be in South Florida; but no part of the counties in which these places are located are in South Florida. The evident reason for this claim is, that "South Florida" means pine-apples, bananas, guavas, mangoes, and other tropical fruit. But the real South Florida lies south of the 28th parallel of latitude, and is nearly tropical. By this, I mean nearly exempt from frost. The no-frost area of the United States is quite small; but what little there is, is found in South Florida. It is the only part of the

United States where tropical fruits can be successfully grown without protection.

There are a few places between the 28th and 29th parallels that are exceptions to this. They have what is here called water protection — they have extended water areas to the west and north, including northwest. Our "Island Home" is in latitude 28° 15', and we grow the choicest tropical fruits and greenhouse plants in the open ground, without protection. Much has been said about growing coffee in Southern California, where frost is unknown. But there is no such no-frost area there; and if there were, the mean annual temperature of that region is 10 or 15 degrees too low for coffee-growing. I hazard nothing in saying, that if coffee is ever profitably produced in the United States it will be in Southern Florida.

Here is rest from battling with snow and ice, and wading in slush and mud; here the weary ones can find a home amid the fragrance of the orange-blossom, the jessamine, and the honeysuckle; where they can pluck from their own trees, and eat the choicest fruits the earth can produce.

The general excellence of the Florida climate is such that many suppose it is all about alike; but this is a great mistake.

Many who desire to cultivate the more tender fruits have found out their mistake. One writing to me from the latitude of Jacksonville says: "Alas! I am too far north; but I did not know it four years ago."

There are some who come to Florida from regions where apples can not be raised, because of extreme cold, and find all the paradise they desire where there is no snow to shovel, and oranges can be grown; but the bulk of human society is made up of restless, ambitious mortals, who will be satisfied with nothing short of the best that earth can give or grow. Had they been permitted to visit the garden of Eden, they had brought away an armful of cuttings of the choicest kinds, and, if possible, had secured a small seedling of the forbidden fruit. They will never be content to raise oranges only, while their neighbors a few miles south raise the finest tropical fruits. Then to have grown the fruit one's self adds greatly to both its value and its flavor.

You need not talk to such a man about the garden of Eden, the New Jerusalem, or any other paradise, while he plucks his own trees and eats such fruits as the cheremoya, mango, sapadillo, and sugar-apple. You had better save your breath until he has satisfied his appetite, wiped his mouth, and sits down to reflect upon the higher wants of his spiritual nature.

The same is true with bee-keepers. Some will be satisfied with almost any change that relieves them of the toting and packing and housing and the freezing and dying of their pets. They would find all the paradise they desire in a region where bees will winter in an ordinary hive on their summer stands, without any danger from cold weather.

But there are many others who will not be satisfied with only a relief from the heavy burdens of bee-keeping, while just beyond there is an accumulation of positive good. They will be satisfied with nothing short of the best. If there is any place in our national domain where there is absolutely no winter, they will want to find it; where no frost comes to spread death and desolation over the nectar-bearing blooms, and bees can fly and gather honey every day in the year. If there is such a place, where the stars and stripes float undisturbed, and the privileges of American citizenship are the rich heritage of all—of such a place many will think, if they do not sing,

How I long to be there,
In such glories to share.

Just such a place is South Florida. But at present most of this climatic paradise is a wilderness. In places it already begins to bud and blossom, and in a few years its fruitage will be abundant. It may be asked, why it has so long remained a wilderness? There are several reasons.

1. Until recently, the worse than Upas blight of slavery has rested upon all Southern enterprise.
2. The same poisonous barrier stood as a ghastly sentinel between South Florida and Northern enterprise.
3. South Florida was long the lurking-place of savage cruelty, the Seminole.
4. It has always been difficult of access by the ordinary routes of travel. But the Atlantic Coast Canal, and railroads now in progress, are removing this difficulty.
5. In the popular thought, South Florida has always been made up of swamps, snakes, and alligators.

Island Home, Brevard Co., Fla., Nov. 10, 1883.

EXHIBITING BEES AND BEE SUPPLIES AT THE FAIR.

TEACHING THE MULTITUDE THE WONDERS OF THE BEE-HIVE.

FRIEND ROOT:—Having been entertained by neighbor Hutchinson's account of what he heard at the Michigan State Fair, it occurred to me that I might give a few incidents from my experience as an exhibitor, which would prove entertaining, if not very instructive, to the readers of GLEANINGS.

Did it ever occur to you, friend Root, that there was a resemblance between a honey-extractor and an ice-cream freezer? I should never think of associating the two myself; but, judging from the number of times the inquiry was made, "Is that an ice-cream freezer?" I should think that, to the average visitor at a county fair, the resemblance must be striking. Of course, I did my best to dispel this delusion; but I must own that, on one occasion, I allowed it to prevail, and even abetted it by deceitful words. But it was all owing to the fact that my inquiring friend had a constitutional defect in his left eye which made winking a habit.

He looked at the extractor critically, whirled the comb-holder around, contemplated it till it came to a full stop, and then looked up, and, with a sharp, tight wink which would have passed anywhere as the forerunner of a joke, inquired: "Is this an ice-cream freezer, mister?"

"Yes," I replied, falling in with his supposed humor. "Something new, which I have no doubt will completely revolutionize the ice-cream business. You see, ice-cream freezers have been made heretofore to revolve in a packing of ice. Now, the important feature of *this* freezer is that the ice is placed within it, in this revolving cage; and thus, coming in closer contact with the cream, it is frozen in one-quarter the time that it takes by the old method."

"Well, I swanee!" ejaculated my interested friend, winking hard with his left eye, "if that don't beat all creation! What won't they git up next?"

"But the freezing of cream," I continued, "is but one of the uses of this instrument. It is primarily and chiefly a churn; one of the best, if not the very best, that is made. It is rather large for a family freezer, but as a churn it is just the thing; and then it is always on hand for parties, weddings, fairs, and such gatherings."

"Well, I vum, mister, if that don't take the cake of all the things I've seen at the fair, you may shoot me." And with a wink so hard and tight that I verily feared that his left eye would be obliterated, he walked away.

It was not long, however, before he returned; and upon his arm hung a country maiden, whom I set down at once for his sweet-heart. He expounded to Amandy Jane — I think that is what he called her — the uses of this wonderful combination, with an accuracy and fluency of language which showed that he had learned well the lesson which I gave him.

I was busy with a local editor at the time; but my rural friend claimed the chief part of my attention. His earnest manner, and the fact that I caught him several times winking altogether out of time, convinced me at last that he was not the joker I supposed him to be.

My first impulse was to apologize, and correct his erroneous ideas of my extractor. But on second thought I concluded not to do so. I felt a tender regard for his feelings. I preferred to have my extractor go forth to the world as an ice-cream freezer, a churn, or even a sausage-stuffer, rather than belittle my earnest friend in the eyes of his Amandy Jane.

The scientific bee-keeper presiding over an exhibit at a county fair enjoys rare facilities for studying human nature. From his lofty elevation he looks serenely down upon the common throng, and measures each individual in inches on his yard stick. As the philosopher or the statesman contemplates in august dignity the wrangling of lesser minds over questions which his acute and profound mind has dissected and analyzed, till what is right and wrong in them has been relegated to the store-house of axiomatic truths, so the scientific bee-keeper, with that self-complacency which superior knowledge imparts, holds up in his dissecting forceps the box-hive bee-keeper who turns up his nose at "patten fixins;" the old woman whose father kept bees, and who knows all about them; the prig who has read an article in the encyclopedia on bees, and who would try to persuade you that he knows as much about scientific bee culture as you do yourself, and the enthusiastic novice of three hives and one season, who corroborates all that you affirm, and helps you entertain the bystanders.

In phrenologic parlance, the first-mentioned individual is possessed of large bumps of firmness and veneration, while the bumps which give liberal and progressive views are deficient. He reverences the box-hive, because he has kept bees in it all his life, and his father before him, while he as stubbornly resists any new notions as if it were sacrilege to entertain them. He estimates his success in bee culture by the number of swarms. In seasons when he doubled or trebled his skeps, he had good luck, and in severe winters, when they nearly all died, he had bad luck; but you can't get him to estimate his "luck" on a substantial basis of dollars and cents. He will tell you of the great pans of honey that were always about the house, and he will expect you to open your eyes in astonishment when, to give you an idea of the stupendous magnitude of his bee-keeping, he tells you that he once got up to as many as 107 skeps.

The old lady is enough like the box-hive bee-keeper to be an elder sister. She is loquacious, self-possessed, and positively refuses to give you the satisfaction of feeling that you are giving her any new ideas. She never kept bees herself, but her father was a noted bee-keeper in his day, and she knows all about them. Here she will recount the wonderful exploits of her father with bees; how he would pick out the king from the swarm, and then the rest of the bees would follow him wherever he went. "The king, you know, is the leader," she adds, in an explanatory way; "and if you only get hold of him, you can do what you like with the rest of the swarm."

I mildly suggest that she probably refers to the queen when she speaks of the king, and venture to enlighten her on the peculiar function of each of the three kinds of bees which make up the swarm. But she refuses to be enlightened. The king is evidently her favorite bee, and she stands by him most faithfully.

Then I go into the subject more minutely; tell her all about the queen's egg-laying, how the bees proceed when they wish to raise a new queen, how the breed of bees can be changed by simply introducing a new queen, etc., till I feel certain that I have dethroned the king, and reinstated the queen. But when the old lady again gets the floor, and she says king eleven times in the next minute and a half, it begins to filter through my cranium that she is doing it just out of spite.

There is another class of people, who appear to take in all that you say, with a greedy ear. You seem to carry them right along with you. Their frequent exclamations of wonder and admiration are exceedingly stimulating to your descriptive powers, and you feel the liveliest satisfaction in being able to instruct them on a subject in which they are so highly interested. But suddenly in the midst of your exaltation, out pops an unfortunate question which proves that they have not taken in the very fundamental idea of your discourse.

Here is a case in illustration: A young lawyer and his pretty wife stood before my observatory-hive, watching with lively interest the bees running over the comb. A single question from them wound me up and set me going. I showed them sealed and unsealed brood. Explained to them the different stages through which the bee passed from the time the egg was laid till it came forth a perfect bee. Having gone over the same ground hundreds of times before, and having a frame of brood in all stages before me to illustrate my subject, it would certainly seem that I ought to have made myself perfectly clear and intelligible, especially to the comprehension of a lawyer. And as if to make the picture complete, just as I was finishing my description, I observed a bee gnawing the capping of the cell which imprisoned it.

"There," said I, "you see a bee just gnawing his way out. Watch and see how he cuts the cap, and crawls out to the duties of existence."

"Well, well!" exclaimed my delighted friend of the law, "isn't that wonderful! exceedingly wonderful! Isn't this whole subject exceedingly interesting, Maria?

"But just let me ask you one question, Mr. McNeill, and then, with your vivid description, I will have the whole subject clearly before my mind's eye. How did he get in there?"

"How did what get in there?" I inquired.

"Why, how did the bee get into the cell in the first place?"

I was speechless for a moment, and I guess a look of disappointment and vexation must have passed over my face, for his wife seemed called upon to answer his question, and she did it in a way which courtesy alone prevented me from doing.

"Why, you silly fellow," she exclaimed, "he was never out of there; he was born and brought up in the cell."

"Oh! I see, I see!" said my lawyer friend, looking decidedly foolish; and hastily thanking me for my attention, he and his wife were soon lost in the crowd. JAMES McNEILL.

Hudson, N. Y., Nov. 24, 1883.

HANDLING BEES DURING A DRY SPELL.

THE ROBBERS THAT ATE ALL THE HONEY, AND THEN CHEWED UP THE COMBS.

THERE were two of my colonies that had their frames attached to the bottom of the hives by old pieces of black comb; wishing to remove this, I transferred into another hive in the last dry spell, and the other bees happened to get a smell of the honey, and set to work robbing them, and cleared the hives of every drop of honey, and went so far as to chew up the combs. I tried in all manners possible to make them stop robbing, but to no avail. After they were robbed, I tried to strengthen them up again by giving honey in feeders on the top of the frames, removing the covering or mat, and closing the entrance; but the robbers clung to the sides, and would not go. Seeing that I could not save them, I opened the entrance; and a few days after, the colony started out. Loth to leave their old home, they settled on a small orange-tree alongside. I captured and caged the queens, and the workers forced their way into the other hives. It made me feel sorry for them; but I tried my best, and could not save them. If you know of any method besides those in A B C, please inform. MRS. M. R. BLAIZE.

Bay St. Louis, Hancock Co., Miss., Nov. 22, 1883.

I have given place to the above because it so vividly portrays the consequences of opening hives during a dearth of pasturage. I presume many of our readers will smile at the idea of robber bees chewing up the combs; but no wonder our friend charged them with that kind of work; for when robbers once get crazy for stores, after having licked up every drop of honey the combs contained, often grind the combs to powder in their eagerness to see if there is not a drop more somewhere; and after they are through there is a general air of "chewed-upness" all through the ranch. Be careful about opening a hive at such a time, my friend.—There is another moral to your story, and that is, that folks who live away down where the orange-trees thrive do not always have honey coming in in abundance, any more than we do. I think the A B C book gives full instructions for such occasions, if you study it well and practice it along with your study.

Reports Encouraging.

MY HONEY REPORT FOR 1883.

I WENT into winter quarters with 11 colonies; lost one; commenced the season of 1883 with 7 good colonies—2 weak and one queenless, which was united with another after having failed to introduce queen. The 2 weak ones were set to rearing queens. My crop of honey was gathered by 7 colonies, which was 756 lbs., about 600 extracted; the rest comb in sections. On a Saturday at 5 P. M. I extracted all the honey from 3 of my best colonies (2 of them having their queens removed), making 6 stories. In just 3 days from that time I extracted all the honey from 5 of the same stories, and obtained 90 ℔s. This was during basswood bloom. Increased 10 colonies. As one of the A B C class, I feel satisfied with my success. I have a neighbor who believes in the log-gum hive, who has double the amount of bees that I have, but who gets less than one-fourth the amount of honey that I do. I. P. C. STEDDOM.

Webster, Ind., Dec. 3, 1883.

My single colony that came to me has developed into seven strong colonies—four of which gave me 200 lbs. of comb honey this year, without more than one day's time spent among them. I have leased them to a bee-man for another year.

Onawa, Ia., Nov. 13, 1883. S. B. MARTIN.

I increased my 8 colonies that I wintered last season to 32. They are all well provisioned. They also gave me 200 lbs. of fine comb honey in 1-lb. sections. They are all well packed in chaff, according to your idea of chaff packing, and I feel easy about them.

C. H. HUBER.

Rural Valley, Armstrong Co., Pa.

SEEKING A FOREIGN MARKET.

Our enterprising friend, Mr. Willows, of Carlingford, who made a crop of several tons of honey this season, has, I believe, sailed for England, hoping to dispose of his sweet harvest across the water. Good luck and good prices to him. C. W. YOUNG.

Stratford, Ont., Dec. 4, 1883.

REPORT FOR 1883.

I commenced the past honey season with 28 colonies, about equal parts Syrian, Italian, and blacks; all in double-colony chaff or sawdust hives. Four or five of the above were weak or queenless, so we could not extract from them. The remainder were from medium to good condition. I increased to 75, principally by natural swarming, and doubled down to 69 for winter, 46 of which are in double-colony chaff and sawdust hives, and 23 in chaff. Nearly all in good condition. I extracted 3500 ℔s. of fine honey, mostly from top-stories, and did not at any time interfere with their winter stores. About half was clover and raspberry, and the rest basswood honey.

LOWER VENTILATION.

I admire your conclusion about large fly-holes for winter for outdoor wintering. I believe in keeping hives close and warm above, and plenty of fresh air below. I don't think they can be packed too warm, providing they have plenty of fresh air at the entrance, and ample provision made in the lid or cover to dry out the cushions as fast as the dampness rises up through them. W. G. RUSSELL.

Millbrook, Ontario, Dec. 3, 1883.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

YOU can put this in Blasted Hopes. When I made my report last fall I told you that you might hear from me again, if the bees did not die in the winter (and you will); but this time the corners of my mouth are turned down, while last fall they were up. Well, they wintered well — lost only a nucleus or two; went in with 80 and came out with 116 good swarms. How is this for wintering in cellars? Can you beat it in chaff hives, Mr. Root? Perhaps you would like to know how it is done. Well, there is no patent on it, and any of you can do it, if you only know how. We got a good boom on white clover, and it did look for awhile as though we should have a big crop of honey to give away this fall. But, presto! and the whole business stopped, and that was the last of it. We got about 1700 lbs. of merchantable comb honey; extracted, say, 200 lbs., and have got 300 or 400 unfinished sections. This, remember, is from 116 stands, spring count — a pretty showing, is it not? I have got in cellars 175 swarms; most of them have plenty to winter, and a few light ones. I don't think they will increase this winter in the cellar. Now let another wan-visaged chap step up and report, and let's see if we can't have the Blasted Hopes department written up in some kind of shape, like the Smilery. Who wants to buy 175 swarms of bees? Going, going! Had I better sell them all? What do you think, brother Root?
E. P. GIBBS.

Lyndon, Ill., Dec. 4, 1883.

Friend G., I do not think your Blasted Hopes report is a very good one; but it may stir up some of the other brethren to give us one that is more worthy of a place in this department. Very likely we are a little at fault in not keeping Blasted Hopes constantly before the eyes of those who contemplate or are just starting in bee culture. If so, we will try to do better.

GETTING REPORTS OF THE BEE AND HONEY INDUSTRY.

A MODEL PLAN OF DOING IT, FURNISHED BY FRIEND BLISS.

FRIEND Bliss has worked the matter down to a system so complete, as it seems to me, we give the full details and report below.

Aug. 15 I sent blanks, like the form below, to about 250 bee-keepers in this county alone.

Dear Sir: Please fill out the following blank, and return to me as soon as the season is over.

No. of Stands in Spring, 1883,...........
" " " " Fall, " ....
" " Pounds of Honey, ...
" " " " Wax, ...

Average price obtained for Honey, $...
Remarks.

Up to this date I have received but 15 of these blanks properly filled out. Why it is that they do not send them in, is more than I can tell. The last one arrived Nov. 10. I for one am ashamed of the above report; but it is the best I could do. As some do not wish to have their names published with their reports, I have left all the names blank. Nos. 8 and 10 are the best; No. 4 I would suggest for Blasted Hopes.
W. W. BLISS.

Duarte, Los Angeles Co., Cal., Nov. 25, 1883.

The blank mentioned above looks as if it had been made with a rubber stamp; and if any bee-keeper in any other State wants to be furnished with one of these stamps, they can be gotten up at little expense. Letters are large and plain, and printed with violet ink, so as to catch the eye. I should think, on looking at the above blank, that at least 150 or 200 ought to have sent in their reports. However, this is how it turns out:

TABULATED REPORT OF THE FIFTEEN.

	Stands in spring, 1883	Stands in fall, 1883	Lbs. honey extracted	Lbs. wax	Price obtained for honey
1.............	62	81	5 000	60	.06
2.............	16	16	680	00	08
3.............	112	123	8 470	73	.07
4.............	180	150	000	00	—
5.............	362	357	4 978	32	.07½
6.............	200	235	11 500	100	.08
7.............	80	120	7 500	50	.08
8.............	140	200	17 000	250	Not sold
9.............	150	150	000	30	—
10.............	30	60	5 000	25	.07
11.............	75	92	2 300	Not caked	Not sold
12.............	90	106	000	00	—
13.............	65	86	2 300	50	.08½
14.............	76	80	000	50	—
15.............	25	52	200	00	Not given

THE CONVENTION AT COLUMBUS.

THE Ohio Bee-Keepers' Annual Convention will be held in Columbus, Ohio, January 14th, 15th, and 16th, 1884. Meetings will be held in the parlors of the Farmers' Hotel, where accommodations can be had at the greatly reduced rates of $1.25 per day for all bee-keepers.

SUBJECTS TO BE DISCUSSED.

How to winter bees successfully.

How many brood-frames are necessary in one hive?

What can be done to prevent adulteration of honey?

How to create a home market for honey.

How many colonies can be kept in one locality?

Can we do without separators?

What shall we do with second swarms?

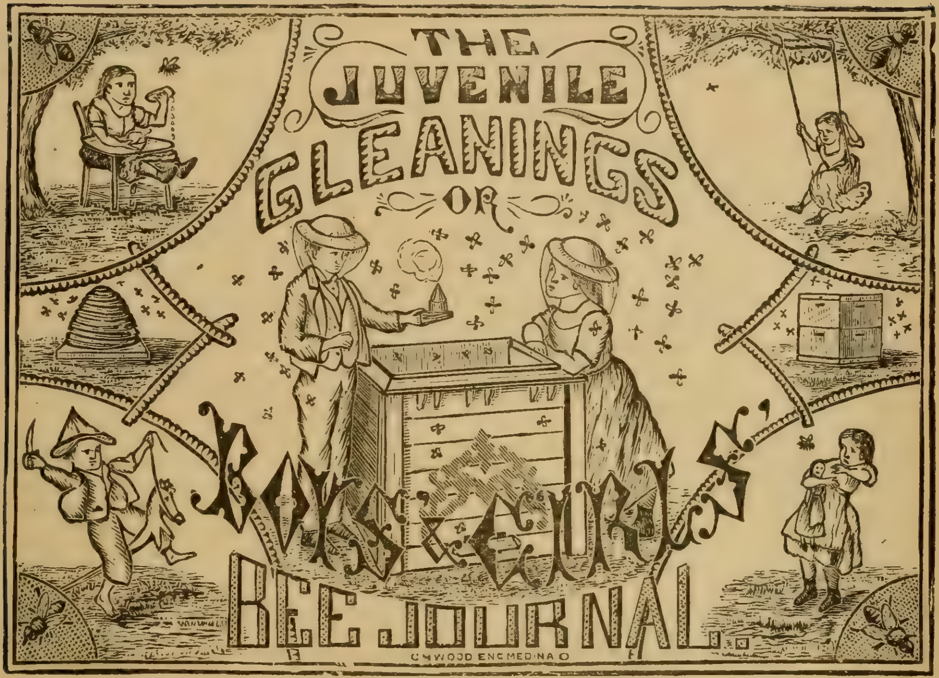
Which is the most salable section — one-half, one, or two pounds?

Which are best — deep or shallow frames?

Is it advisable to have a standard-size frame for all bee-keepers?

The above subjects will be discussed by able men. Chas. F. Muth, of Cincinnati, A. I. Root, Medina, L. L. Langstroth, and many other able men will be there; and in addition to the above, Prof. Lazenby will deliver a lecture on honey-producing plants; and Dr. Besse, of Delaware, will lecture on ancient and modern bee-keeping; and, in fact, all questions interesting to bee-keepers will be discussed. All are invited to attend. The convention will be held at the same time the Ohio State Board of Agriculture meets, and it is customary to have half-fare rates on all roads leading into Columbus.
C. M. KINGSBURY, Sec.

Mt. Vernon, Ohio, Dec. 3, 1883.



He that is faithful in that which is least, is faithful also in much.—LUKE 16: 10.

MYSELF AND MY NEIGHBORS.

WHO IS MY NEIGHBOR?—LUKE 10: 29.

Thou shalt love thy neighbor as thyself. — MATT. 19: 19.

JESUS said, "Thou shalt love thy neighbor as thyself." I presume he put it in this very emphatic way for the express purpose of guarding us against sefishness. In the Home Papers I have talked to you about selfishness, and I have tried to tell you about the evil of thinking about one's self, and forgetting all about other people, or caring nothing for other people. While I look at it now, it seems to me that selfishness is the great crying sin of humanity; and the girl or boy who starts out in life with no greater end in view than to please self, will be pretty sure to come to some awful end, sooner or later.

A little story of real life is now agitating the papers, and it illustrates so vividly what selfishness may lead to, that I want to give it to you briefly. It did not occur exactly in my immediate neighborhood, nor among my neighbors, but it occurred in the neighboring town of Shelby, Richland Co., Ohio. In some town quite near to Shelby a safe had been opened and robbed, and a sharp detective had traced the burglars to Shelby, and found them in the morning sitting in a hotel. There were four of them, and he certainly lacked wisdom to attempt to arrest the four, alone and unaided. Very likely he thought there would be little resistance in such a public place with so many around; but, my friends, when one is so lost, both to God and man, as to attempt to rob a safe, he is generally lost, also, to reason and good sense. Just think a moment of the act of robbing a safe. As a general thing, a safe contains money belonging to several different individuals — money probably earned by hard labor; may be the earnings of a seamstress or a washwoman, laid by until a time of need. Money is now usually deposited in a safe, because we have had so many sad lessons in regard to the unwise way of keeping it in houses, or about one's person.

Well, these four great strong men deliberately decided to steal this money they had never earned. They did not care whose it was, or what were the circumstances. They were determined to have it, even at the risk of their own lives. I have often wondered what they wanted it for, and what they were intending to do with it. They certainly could not want it to buy property, because such men can not use property much, of any kind. They could hardly want it for any of the purposes that people want money for. May be they wanted it to drink and gamble with. At any rate, they had got so far away from God and the precepts of the Bible, that they decided to take it. Did you ever think what a yawning gulf must be passed by a human soul, in wandering from a disposition to do right, and to love God, away off to that other shore were God and right are lost to sight, and ignored? Little by little, step by step, this path of sin is traversed. Jesus is rejected, and Satan is accepted. Do you know what it is to accept Satan? Listen, and I will tell you. As I tell it from memory, I may not have it all quite correct, but it is substantially so.

The detective produced his papers, and demanded their surrender. One of the robbers, with an oath, shot him at once, although before he died he shot one of the robbers. Of course, the people were aroused; the station agent was one of the next to demand their surrender, but he was shot. One of them was secured, and this left two at large. In a few minutes over four hundred people were in pursuit of them. One was soon taken. The more desperate one of the two, however, fled; and when he found they would soon run him down he met a man on horseback, and ordered him to get off. The man refused, when the robber shot at him. He thus obtained the horse; but as it was not a fast one, he soon fixed his eye upon one driven by two women. He ordered them to get out of their buggy. They also refused, when he fired at the two helpless women. Of course, this state of affairs soon created the wildest panic in the neighborhood and vicinity. Perhaps never before were people aroused to a higher frenzy of indignation. Three men were dead; others were being fired at, and the desperado was still at large, dealing death and destruction to whoever stood in his way.

He at length passed by a man and a boy who seemed to have about the kind of horse he wanted in order to make his escape. He, as before, peremptorily ordered them out of their wagon. They refused, until his revolver was again used. Then the man got out; but the boy showed fight, and in the struggle the robber fired again, cutting one of the lines with the bullet. The horse ran away, the vehicle struck another, and was overturned in the streets, and the desperado stood, the center of the indignant crowd who now came up around him. He now showed his cowardice, for such men are always really cowards. The miserable, lost, and ruined soul called on the crowd to spare his life because of his mother. He evidently thought that the holy and sacred word "mother," used at such a time, might have the effect of winning sympathy. Now, my dear friends, I do not mean to say that what the crowd did was right; for in fact I am pretty sure it was not right. It is right to kill, to *save* life, and he told them he surrendered, and begged them not to kill him. But before the words were hardly out of his mouth he was riddled with bullets.

Truly, "the way of the transgressor is hard." Just think of it, children, what an awful fate, and what an awful scene, right here in the midst of schools and churches and civilization! Is it possible, that the love of money can prompt rational human beings to acts like this? When you are prompted by selfish feelings; when you are thinking of self, and forgetting God, your neighbors, and your native land, think of the awful end of these men who deliberately and coolly set aside and ignored that little precept which Jesus gave us, "Thou shalt love thy neighbor as thy self."

THE DISCOVERY OF SILK.

COMPILED AND WRITTEN BY MISS NELLIE LINCOLN ROSSITER.

THE discovery of silk, by one of the imperial family of China, some three thousand years ago and more, has brought forth one of the most important and valuable industries of the world. We are told, that "since that time, there is set apart in the gardens attached to the Chinese royal palace, a special place allotted to the cultivation of the mulberry-tree (called in China the golden-tree), and to the raising of silkworms." "It was during the reign of the Emperor Hoangti that a new epoch commenced in the culture of silk. The insects were sheltered and carefully tended, and the real rearing then began."

From the history of China we learn, that "2700 years before the Christian era, the Emperor Hoang-ti, the Emperor of the Earth, who reigned for more than one hundred years, taught the Chinese to construct houses, carts, ships, mills, and other useful things of a similar kind, and persuaded, moreover, his first and legitimate consort, Si-ling-ché, to attend to the silkworms, and to try several experiments in order to increase their utility; wishing, as he said, that his wife the Empress might also contribute to the welfare of his subjects. The Empress accordingly gathered the silkworms from the trees, and, with the women attached to her household, tended them with much care in the imperial apartments, supplied them abundantly with mulberry leaves, and kept them very clean. It was soon discovered that they thrived better in rooms than in the open air, where they were constantly exposed to their natural enemies, birds, serpents, and spiders, and to the ill effects of changes of temperature — all which were obviated by subjecting them to domestic care. The cocoons gathered in the open air and in the rooms were also very different; the latter being not only more numerous, but of a better quality, and richer in silk. Care was afterward taken that the eggs were hatched within the rooms, and there were thus two kinds of silk culture — the natural and the artificial; the superiority of the latter becoming more and more manifest."

"Similar exertions for the domestic culture of silk were made by the succeeding empresses, among whom the consort of the 'Augustus of China,' Yao, principally distinguished herself. The art became thus the principal occupation of the empresses, and several apartments of the imperial palace were given up to it. From the highest rank of females, it came to be exercised by the whole fair sex, and obtained such favor that it proved to be the principle source of the wealth of China, which was from thence denominated 'the inexhaustible storehouse of silk.'" The fair sovereigns of the empire did not, however, content themselves with the rearing of the worms, but attended also to the carding and the weaving. The original promoter of that art in China, the Empress Si-ling-ché, had already taught her women, "to convert the raw material into clothing stuffs, and to embroider them with representations of flowers and animals." Soon, from the emperor down to the learned classes, the princes, courtiers, and mandarins; and, in short, all who were in sufficiently affluent circumstances, were dressed in satin or damask. This greatly encouraged the rearing of worms and the weaving and manufacturing of silk, especially as it occasioned a sumptuary regulation, which still continues to subsist, and marks the distinction of ranks among the Chinese; the higher classes having appropriated to themselves the exclusive privilege of wearing the silk stuffs, and assigned to the inferior orders, cotton and cloth dresses.

There, friends, dosen't that sound a great deal like bee culture? and is it not funny that two industries have developed so much alike? How I should like, if I dared, to go into the study of silkworms and silk-raising; but many, many times over have I been obliged to say to myself, "No, my friend, you must not scatter your powers, when life can not compass all industries, and it is more important that you do well what you do do, than that you have a little smattering of so many things." Another thing, friends: Do you not notice how the development of silk-growing seems to have been almost entirely in the hands of women? What more fitting work for the wife of a king? and what more praiseworthy work can there be for women of the present day who stand prominently before the people, than to encourage industries like silk-raising and bee-culture? The study of the natural history of these insects that one must do to progress in the work, leads, as it were, almost into the portals of God's own domain. We see God, as it were, through his mighty works.

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ANNA AND HER LIGHT-HOUSE HOME.

ALSO SOMETHING ABOUT "PETER'S" NEW NAME.

I LIVE on an island at the foot of Lake Ontario, near Sackett's Harbor. My papa keeps the light-house. My auntie lives here too, and keeps bees, and she takes GLEANINGS. I should like to see that baby-boy of yours very much, and I looked clear through auntie's A B C book to find his picture, but did not succeed. I have read that you want a name sent for your little boy. I have brothers named Walter and Ralph. I think those are nice names, and I have cousins Bruce and Hugh, and I think those are nice names too. A few days ago there was a bad storm, and we are afraid some poor sailors were wrecked. We have an old cat eleven years old. ANNA M. JOHNSON, age 9.

Henderson, N. Y., Nov. 15, 1883.

Thank you, Anna, for the names you suggest, but our baby is already named. A short time ago a kind lady suggested we should name him Huber, after the father of bee culture; and as the name seems to please all the baby's friends and relatives, he is already christened Huber, or "Hubie," for short. And now everybody is inquiring who Huber was. And that makes me think of what friend Langstroth said when I last saw him, that there is no good translation of Huber's writings in the English language; and, for that matter, it would be pretty hard to get a copy of the only translation that ever was made. Now, friend Hasty, I wonder if you see what is coming. You told us you could "quack Latin." Can you quack French? Now, let us turn in, and even at this late day or hour hunt up all we can in regard to poor old blind father Huber. If any of our readers can tell us where we can find a copy of Huber of any sort whatever, they will confer a favor, for we want to be able to teach little (I almost said little Peter; and, by the way, I think we will have Peter for the second name) Huber all about his illustrious namesake, when he gets old enough.

JUVENILE·DEPARTMENT

Every girl or boy, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1.00 to $1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock, six different books, as follows: Silver Keys, Sheer Off, The Giant Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room.

"A chiel's amang ye, takin' notes;
An' faith, he'll prent it."

MY UNCLE BEN.

I TOLD you last month I had an Aunt Sarah. Well, I have got an Uncle Ben, but I have not seen him for a great long while. When we were children, the word Uncle Ben always used to bring pleasant associations with it. When somebody said, "Uncle Ben is coming," there was always a general rejoicing; and when we went down to grandfather's it used to be the nicest kind of fun to go with Uncle Ben. He used to take us fishing and chestnuting, and he was an adept in climbing trees, and shaking down the nuts, and then we used to pick them up on halves; that is, he had half for shaking the trees, and we had half for picking them up. I used to think it was the nicest way to get rich that ever was thought of, picking up nuts on halves. But I believe the most fun for me was in helping Uncle Ben make maple sugar. When he made sugar it was almost always sunshiny days, and he used to go around from one tree to another with a couple of tin pails; and all the funny things he found he used to call us to see. I used to carry sticks to make the kettle boil; and when it came noon, Uncle Ben would surprise us by skimming boiled eggs out of the sap-kettles. My! but were not those eggs nice? Sometimes they cracked open, and the sweet syrup would get inside, and then we had boiled eggs sweetened with maple-sugar syrup. I can taste that maple syrup now, when I think of the tin dipper. Well, we have all grown up; Uncle Ben has got to be almost an old man, and perhaps he is more bald-headed than I am. But what do you suppose made me think of Uncle Ben this morning? Why, it is because I got a very prettily written letter from a lady who teaches Sunday-school away off down in Missouria. I did not think a word about Uncle Ben when I was reading the letter, but I just thought a great lot about him when I got to the end of the letter. You read it, and see if you can tell why.

Dear Cousin Novice:—The only consolation I have for not thanking you ere this for GLEANINGS is to resort to the old saying, "Better late than never." GLEANINGS has been a welcome visitor to me for several months, for which I return many thanks to you. We enjoy reading it, very much. I say *we*, for "that husband of mine" is generally the first to open and read it. I especially enjoy Our Homes, but am not much interested in bees, although I think they are very useful little pets. I see a great many letters in GLEANINGS from Missouri, but none from this place. I can say nothing on the bee subject in this place, only that I have not seen *one bee* since I came here, and have lived here a year.

I will give you a little description of our town: It is a mining town, of a population of 5000. Lead is the production. The works cover a number of acres of ground, and it is said that the largest lead-mill in the world is to be seen here. About 600 men find employment in these works. Although it is a mining town, it is quite a nice one.

We have a good Sabbath-school. The school is going to give a share of $10 for the benefit of a theological seminary in Nebraska. My class (young married and single ladies) is going to give a share of $10 besides the school. I think you are doing a great deal of good in this world, and will surely reap a great harvest.

One of "Uncle Ben's" daughters,—
MAY HUDSON.
Bonne Terre, Mo., Nov. 22, 1883.

9 SWARMS FROM 3 HIVES.

My brother keeps bees; he has got 13 swarms. He had 3 swarms in the spring, and they swarmed 9 times. He bought 5 swarms this fall, and put 2 of them together. **KATIE BRIGGS.**
Deposit, Del. Co., N. Y., Nov. 13, 1883.

SOME BEES THAT ARE TO BE KILLED.

Papa had 55 swarms of bees, but he will have to kill some of them, for he is going out west, and can't sell all of them. **LEWIS S. SCHWAB, age 7.**
Atkinson, Henry Co., Ill., Nov. 10, 1883.

Can not some one take those bees and save them from their impending doom? I am sure, friend Lewis, your father would rather give them away than to kill them, would he not?

EDWIN AND HIS BROTHERS AND THEIR BEES.

In the spring we had 12 colonies of bees, and for awhile last summer it seemed as if they would not quit swarming, and now we have 35 swarms. I have 3 sisters and 4 brothers, and I am next to the youngest. Last spring pa gave us three younger boys a swarm apiece in Langstroth hives. But only one gave any surplus honey (about 30 lbs). There is a great deal of white clover around her. We take GLEANINGS, and I like to read the JUVENILE letters very much. We do not do any thing with our bees at all in the winter, but let them stand all the year round without moving them, until this year.
EDWIN J. STICKLE, age 13.
Macomb, Ill., May, 1883.

KATIE AND HER LITTLE SISTER.

My pa keeps bees. We have 7 swarms. Two went to the woods. We moved from Effingham Co., Ill., to Vigo Co., Ind., and lost two swarms. I should like to see your little boy, but I live too far away. I have a little sister; she can just stand alone. She is eight months old. **KATE B. WEBSTER, age 9.**
New Goshen, Vigo Co., Ind.

FROM 18 TO 41, AND 6 BARRELS AND 800 LBS. OF HONEY.

My pa has 41 hives of bees now; he had 18 last spring, and did not lose any during the last winter. We have had a great time for honey this summer, and got 6 barrels of extracted honey, and about 800 lbs. of comb honey. Don't you think this is doing very well? **CLARA A. LURKER, age 13.**
Cold Spring, Camp. Co., Ky., Nov. 15, 1883.

My pa keeps bees. He has 55 swarms. I have got two big brothers; the elder one went to Wisconsin this week. He wants me to write him lots of letters. I wish you would send me some of those little envelopes on your five-cent counter. I think you had better name your little blue eyes Jumbo. I will send you five cents to pay for the envelopes. I hope you will think this is worth printing.
MAY SEAMAN.
Harford Mills, N. Y., Sept. 22, 1883.

MAGGIE'S REPORT.

My father has 43 stands of bees. He worked most of his bees for extracted honey, and he got 1800 lbs. from 14 swarms, and about 200 lbs. of box honey. He wants to winter some bees in the cellar. Pa takes GLEANINGS, and I like to read the letters that are in it. My brother has 2 swarms. Pa has not got any black bees, but he has the Italians and hybrids.
MAGGIE L. STEITZ, age 11.
Stottville, Col. Co., N. Y.

HOW JOHN'S FATHER ITALIANIZED ALL HIS HIVES.

Pa has bees. I have a hive of Italians. Pa bought an Italian queen; divided, and they made five queen-cells, and one hatched; they cut one down, and we moved the frame to one that had no queen, and they hatched one. We took out a black queen from a stand, and moved the frame again, and they cut one down before they missed their queen. They hatched the other, so all four have Italian queens from one. **JOHN M. WITTE.**
McGregor, Tex., Oct. 30, 1883.

HOW TO GET EARLY TOMATO-PLANTS—BY A JUVENILE.

As pa is writing, I will say a few words. I can wash dishes, and milk; am learning to spin; I can twist yarn, and do many chores for my mother. I will tell the juveniles how to plant choice seeds. Fill large egg-shells with rich soil and sand; plant one seed in each; set them in a dish of sand; keep moist. If this is worth a book, please send Silver Keys. **MARY F. PIERSON, age 9.**
Kellerville, Ill., Nov. 22, 1883.

To be sure, your letter is worth a book, Mary, for it not only tells what you can do, but it also tells what other folks can do. But the information you give is a little in advance of the season, I opine. Wait until about February, and then start your tomato-plants in egg-shells, and they will be of some value. It will do no harm, however, for some of the young ones to raise some plants now, so that they can "get the hang of it."

THE SECRET OF GOOD LUCK WITH BEES.

We couldn't do without our bees. I have a sister and a little brother, and we are very fond of honey. We have all the honey we want. My pa always has good luck with his bees, because he takes care of them. He traded two hives for a load of hay this fall, and he has 13 left. He sells some every year.

CHARLIE PALMER, age 10.

Fremont, Ohio, Nov. 26, 1883.

MAUD'S REPORT.

I thought I would tell you how papa is getting along with his bees. We have 33, some packed in chaff, some in corn fodder. He took about 800 lbs. off. I should like to see your picture in GLEANINGS. I go to school; I have only one sister; she is larger than I am. I play the organ. MAUD A. RHOADS.

Loysville, Perry Co., Pa., Nov., 1883.

Why, friend Maud, my picture is already in the A B C book, and we have a photograph, cabinet size, which we mail to all who send us a new subscription, after they have subscribed themselves. Isn't that enough?

BERTHA'S PET QUEEN.

My pa wintered out 4 swarms last winter, and from these 4 swarms he has 12 now. The other day pa and I were transferring one of the light swarms to another light swarm, and in the old hive I saw a queen-bee. I tried to catch it, but it rushed in among the other bees, and I called pa, and he helped me catch it. I got a glass, and he put it in, and I got a piece of honey and put in the glass, and the bee is living yet. Pa was at the bee-keepers' convention at Toronto, and saw you up there. He has sent for an A B C book, and I shall be glad when it comes, to see what he meant by the A B C book.

BERTHA C MORRISON, age 11.

Frelighsburg, Can., Nov. 9, 1883.

WHICH ARE THE BEST BEES, AND WHICH IS THE BEST HONEY?

My brothers have 30 stands of bees; they have 3 kinds of bees—Italians, Holy Lands, and Cyprians. For my part, I think that the Cyprians are the crossest. The honey crop wasn't very good this year. The frost killed the buckwheat in full bloom. I think the white clover is the best; don't you? I am going to school, and to Sabbath-school, and I like to go. AUGUSTUS F. MACK, age 10.

Mount Cobb, Lackawanna Co., Pa., Nov. 15, 1883.

I guess we pretty much all agree that the Cyprians are the crossest, friend Augustus; and I guess we pretty much all agree, too, that there is no finer honey in the world than white-clover — that is, there is nothing finer as a steady diet.

BELLA'S LETTER, AND HER CONCLUDING POEM.

My pa has 3 swarms of bees now; he got them this fall, and they worked hard. They are now packed away for winter. I go to school. Our Sabbath-school has closed. I should like to see the baby that I read about in the JUVENILE. I inclose a card for the baby.

The bees are busy,
  Bright little things;
We can be so,
  Though we have no wings.

BELLA FRASER.

Campbellville, Ont., Canada, Nov. 24, 1883.

That is a tiptop letter, friend Bella, and I admire especially the card it contains. I wonder if you are a busy little body, and always busy at something good.

THE LITTLE GIRL WHO DOESN'T KNOW ANY THING ABOUT BEES, AND DOES NOT LIKE HONEY.

I have seen so many little girls and boys writing for the JUVENILE, I have put it in my head to correspond also. My ma has plenty bees, but I can not tell you any thing about them, but that they sting awfully. Ma has had her bees three or four years, and I never saw so much as the inside of a hive. My little brother is braver than I; he goes about them without veils or any thing on his face, and he helps mamma to catch new swarms, and he does not care if they do sting him; sometimes there are about half a dozen on him, and he doesn't mind them, and they go on about their way; but I could not stand still with that many bees on me; I think I should go crazy. I don't like honey anyhow, and the bees don't like me.

ESTELLE H. BLAIZE, age 10.

Bay St. Louis, Miss., Nov. 22, 1883.

FLORENCE'S LETTER, WRITTEN BY HER PAPA.

I have a bright little girl five years of age and she used to claim the JUVENILE GLEANINGS until you got its mother's cover on, and to-day she said, tell Mr. Root to send her a little book all pictures and not so much print, as she can not read yet. She only knows a few letters, but she insisted on writing a letter like the other children. Below is her letter.

"My name is Florence May Shaver. My pa keeps bees. I helped him sow some Rocky Mountain bee-plant last fall, and this summer the bees worked on it. We had a flower garden and had lots of flowers, but the bees liked the poppies the best of all. I have no brothers or sisters but I have a little wagon and a doll. My ma wears spectacles. Pa has a pair too. Send me a nice book, if you please."

The above are her words. She is a fearful talker, and I had to write her letter. J. H. SHAVER.

Sloan, Iowa, Oct. 20, 1883.

BITTER HONEY, ETC.

Pa received GLEANINGS, and I read in it about the marriage of "Toka," and I am writing to wish her much joy; also to thank you very much for the book you sent me. Our bees gathered bitter honey, and we don't know what they gathered it from, unless they got it from the dog-fennel. And now I want to ask you a question: Will the honey from the flower of the garden sage be bitter? CHAS. H. KYLE.

Houston, Mo., Nov. 17, 1883.

As bitter honey has already been mentioned as coming from dog-fennel, I should think it very likely, friend Charles, that was where yours came from. I do not think the honey from garden sage would be bitter; in fact, the finest honey in the world comes from the California sage, or mountain thyme. It might possibly have a sagey flavor when first gathered; but if thoroughly ripened in the hive, I am quite certain you would perceive no objectionable flavor.

HOW LAURA GOT HER HYBRID BEES.

I thought I would write you a letter about my bees. I can't write very well, but I will soon learn, for I am going to school. I have got one stand of bees. Papa gave it to me. He has 30 stands; he had 100 last year; they nearly all died last spring, but none have died this winter. I'll tell you how papa happened to give me my bees. He and I were out in the apiary in February, looking at the bees, and he picked up a dead queen on the outside of the hive, and gave her to me. I took her in the house, and I saw her kick, and then I went and got a little honey, and put on her mouth, and she came to, and then I went out and showed her to papa, and put her in the hive, and then he gave me that stand of bees. I have two big brothers, but they don't like to tend to the bees, for they don't like to be stung. I don't like to be stung either; but I have to help pa feed the bees every time. He feeds them in little feeders he got of you. I wish Blue Eyes could come and see me. I know I should love her.

Mattoon, Ill. LAURA E. BALDWIN, age 8.

HOW AUBREY GOT STUNG BY A DEAD (?) BEE.

Pa bought a colony of bees the 23d day of last May, and they swarmed twice this summer. I read about your baby, and I am much interested in it. We have a baby named Stella. Ma put her by a chair, and she stands by it. I found a dead bee; and as I was showing ma the scales of wax, I happened to press on it, and it stung me. One day I tried to catch a bumble-bee. It was in a bloom of snake's-head, and I tried to catch it with a leaf, and it stung me. It did not hurt much at first, and I laughed; but directly it commenced to hurt, and I did not think it was so funny. Pa put his bees in boxes, and piled straw in around them, and put boards on to keep them from being rained on. He has 6 hives, and a great many frames and sections ready for next summer's use. He has a turning-lathe and jig-saw, and he made him a smoker, and it did not suit him, so he made another. He took about 50 lbs. of honey this season. I forgot to say that Stella is only five months old, and that is the reason I told you about her standing by a chair. Can your boy beat that? AUBREY BOWERS, age 10.

New Ross, Ind., Nov. 12, 1883.

No, Aubrey, our boy can not beat that, but he can do as well, although I did not know it until I got your letter. I took him and stood him up by a chair, and tried him, and he stood up very well; but as he began to scold quite lively pretty soon, I rather think it was hard on his chubby little ankles. Our boy is six months old. But that is nothing strange. You know that girl-babies are always a little smarter than boy-babies; but, you see, when we get older we get ahead of them. I think it was really naughty of that dead bee to sting you. Dead bees surely ought to know how to behave better than that.

OLIA AND HER TEACHER.

My pa has 20 hives of bees. He got a great deal of honey this summer. He takes GLEANINGS. I read it, and see many letters in it. I go to school. My teacher is a good one when she is not mad; but when she gets mad we have to look out for her. Pa has an extractor he bought from you. He says he would not take $25.00 for it, if he couldn't get one like it. OLIA BANNON, age 12.

Venango, Pa., Oct. 10, 1883.

My little friend, I want to caution you somewhat, about getting in a way of finding fault with your teacher. It is a very bad thing for girls and boys to do, and the offense ought to be a very great one before the child is allowed to talk about his teacher. Are you not mistaken, in thinking your teacher gets mad? Children often use the term "mad" when the parent or teacher is simply using proper discipline. Suppose your teacher could not make you mind, and in a sort of helpless way allowed every scholar to do as he pleased; or suppose she did not have firmness and decision enough to keep you straight, would you have any respect for her? When you come right down to it, now, do you not think more of a teacher who makes you "toe the mark," as the expression goes, even though she sometimes has to be severe and stern to do it, than you would of a teacher who was afraid of the scholars, and could not manage them at all? What becomes of children who are never made to mind? I think, if you look about you, you may find some such in your neighborhood. I have sometimes thought it was as great a misfortune as if they had been crippled for life; for if it results in letting them grow up to be bad men and women, it is the worst sort of crippling that ever happened to any human being.

STELLA'S REPORT; FROM BLASTED HOPES TO REPORTS ENCOURAGING.

Pa got some Simplicity hives constructed; got a friend to put swarms into two of them; went into winter with plenty of honey; gave bees no protection; came out in the spring with about one quart of bees in one of the hives. He then bought another colony of my uncle; got 50 lbs. of comb honey and one new colony, making three in all. This winter, 1879, he gave bees protection. They came out in the spring as strong as they were when put away for winter.

During this season he increased to five. In 1880 pa purchased an extractor, smoker, and some hives of you; extracted only one gallon of honey; took no comb honey. He had now spent fifty dollars; had got 60 lbs. of honey, all told. This winter he put away his bees with cushions on top and each side. Bees all died before winter was half gone; had not consumed half of their stock of supplies; so in 1881 he was in Blasted Hopes. In 1882 pa purchased two new new colonies of my uncle, one of which he put in our hive the 28th of May; the other the 15th of June. During this season he extracted 150 lbs. of honey; wintered by filling top boxes with cut straw, and then hanging horse-blankets over the hives, letting them hang down all around nicely, leaving room for bees to pass in and out. They came through all right, and this season we have taken from the two colonies, 340 lbs. of extracted, and 40 of comb honey, and got three new colonies, one of which he gave to my brother. This is my first letter.

STELLA BRANDON, age 13.

Laura, Ohio, Nov. 16, 1883.

Thank you, Stella, for your very kind and complete report. There are several lessons to be learned from it. For instance, during the first few years your pa kept bees it would look very much as if yours was a very poor locality; but the conclusion shows it must be a very good locality, to get 300 lbs. of honey from only two colonies. It also illustrates the importance of not being discouraged by one, two, or three failures, and that a bountiful flow of honey will be almost certain eventually, if the bee-keeper tries to inform himself, and keeps on year after year.

Our Homes.

Our Father which art in heaven.—Matt. 6 : 9.

IN one of the Home Papers of a few months ago, I told you that I had been in the habit of late of asking myself questions. I say "of late," because I am now in the prime of life, and my powers of mind are probably as good as they ever will be. My judgment and wisdom are probably as bright and clear as they ever will be again during my life. Well, you know it is a common expression to say, when we are discussing certain acts, etc., that common sense ought to teach a man so and so. And now the question arises, What does common sense teach? what is common sense? I presume we understand by the term, at least to a certain extent, that it is a kind of sense, or a sort of wisdom, that all intelligent beings will agree to. For instance, we have the proposition that honesty is the best policy, and all men agree to it—at least, they agree to it in theory if not in practice. So we may say that common sense teaches that honesty is the best policy. I might go on enumerating other propositions that common sense would agree on or assent to, and the question would soon arise, How broad is this common sense, or how much is there in this world that universally accepted? Going still further, is what does common sense teach us of God, the Creator? How ought we to look toward God, and what should be our relation to him? What is there stamped in ourselves that we can feel and see and know in regard to the Supreme Being who reigns over all? Jesus taught us to call him our Father—our Father, too, "who art in heaven." This is the language of our opening text. Luke says this was given in answer to a question by one of the disciples, who asked him to teach them how to pray. As the prayer is given a little differently in Luke from what it is in Matthew, we presume this was at another time; but his reply was the same, that they should commence by saying, "Our Father which art in heaven." We judge from this, that Jesus deemed it best to teach them in the outset to call God their Father, or their heavenly Father, and that the relationship between father and child was the best illustration that could be given, of the relationship between ourselves and God. Well, I have been often, of late, considering this point of our relationship to God; and the more I study it, the more it seems to me that common sense dictates, or my best wisdom and judgment, if you choose, that the best way we can think of God is as a heavenly Father. Please excuse me for homely and commonplace illustrations, but in this line I have been studying over and over the new member of our household that God has so recently sent us. What is it in our boy-baby that I most love to see? what is it that makes my heart thrill with joy, and pleases me most? Is it not to notice his growing faith and love for his papa? With that growing faith and love, I am also pleased to see him exhibiting a sort of right, or ownership. His look and attitude seem to say emphatically, *my* papa. He owns me; in one sense, I am his property, to a certain extent.

Yesterday, for the first time, almost, since the large engine was put in our factory, we had somewhat of an accident with it. In the middle of the day we had to stop. As I passed around through the rooms, and noticed how pleasant and comfortable all seemed to be, I felt sad to think that very soon the rooms would grow cold under the influence of a pretty chilly, wintry day. The massive iron pipes that had been giving out the heat would soon cease to give it out, for the steam was stopped. As we have dispensed with all our stoves, business must come to a standstill right speedily, and the prospect was that some hundreds of dollars would have to be expended before the work could go buzzing along again. Well, I went over to the house for something, and caught sight of the baby. His face brightened up, and I was greeted with a crow and one of his bewitching smiles. He said by actions, "No, papa, no matter what has happened, you must not look troubled or gloomy when I am around. You have always given me a pleasant smile and word of cheer all my little life, and you must give them to me still. It is my right, and I demand it." And I was glad he did demand it, friends. It did not hurt me a bit, to be obliged to look pleasant to somebody, and it admonished me that it was my duty to trust in God, and to lean upon God, even as the baby trusted and leaned upon me. Still further, it was my duty and right to demand of God, (please bear in mind, dear reader, that I use this word with reverence and respect) grace and strength and peace for all my trials. In other words, it was my duty and my privilege to sink self; to pound down, if that is the right expression, gloomy or complaining feelings, and let God rule. If it were an earthly father I was trusting or appealing to, he might fail in judgment and wisdom; but our Father which art in heaven can never fail; his arm is never shortened; it is *all* his, and he has told us over and over again, that he must be first and foremost and supreme; not even steam-engines, nor factories full of busy workers, have any right to push themselves up before him, "for I the Lord am a jealous God." He has told us so, or he has said in substance, "I want to reign in your hearts entire; your love for me must not be divided; I can not accept of a divided love."

Suppose some other baby should be brought into our home by friends or relatives, and I should take it in my arms, with the kisses and caresses that I have been giving our own baby. Very likely he might have a touch of jealousy, for even babies often show it. In one sense I should hate to have him show unreasonable jealousy; but in another sense it would give me a great thrill of joy to think I held such a place in his affections that he could not bear to think of the love being divided; that he wanted the whole of it entire.

Perhaps my illustration is a poor one, but I think it answers the purpose, dear friends. God is jealous of every thing or anybody that can in any way divide our love to him. No one can have two earthly fathers. Father holds just one place; so God fills one place, and that one place only.

Now, friends, I want this Home Paper to be a helpful one. I need hardly tell you that I want all of these Home Papers to be helpful. I know you have trials and difficulties; I see them running all through the letters you send me from day to day. I want to see you all happy; I want to see you enjoy your work, and enjoy life, and I want to see you enjoy the things God has in store for you. Now, all the enjoyment in this life depends very greatly upon a proper understanding of our Father, and knowing what we ought to do, and especially what our deportment should be toward him. Does he want our prayers? The Bible says so, and I think common sense says so. Jesus did not tell that disciple that he need not pray at all when he asked him how he should pray; on the contrary, his reply seemed to indicate that he should pray often. Shall we pray often? and how shall we pray? Let us have some more homely illustrations, if you choose.

Some time ago, in talking with friend Kendel, we were discussing the matter of employing boys; for there are many in the city of Cleveland constantly seeking employment, as well as here in Medina. He made this remark: "I make it a rule, never to employ a boy who asks in the outset what pay he is to have." At first I did not just see why he should make such a trifle a test of the boy's disposition and ultimate value. I set common sense at work, and pretty soon I decided this: That it was an excellent test; for boys who are seeking employment, and want to know at the outset what pay they will get, would, as a rule, in the end, think that pay was the principal object, and learning to do business, or getting a start with a good business man, was of secondary importance. Suppose that some one who had been thinking of becoming a Christian should begin to ask God what pay he should get, or should question the pastor or Sabbath-school teacher, as to how much pay he should get for becoming a Christian; suppose he should ask how soon he should become very happy, or, would God commence right off to send him whatever he prayed for. Why! it would be awful. One can never become a Christian in that way; neither can any one become a profitable member of society where his constant question is, How can I get the most of this world's goods by the least exertion? Religion is the direct opposite of selfishness; and love to God, and love to one's fellow-men, drives out selfishness. The little illustration I have given you shows what the attitude of one seeking employment should be toward the one he would have for his employer; or, if you choose, it illustrates what the attitude of a son should be toward a father, and, in the same light, our relation toward God. Now, if we are the children, and God is the Father, what line of conduct becomes us? the Bible teaches not only that God is a heavenly Father, but that man is free to do right or wrong. Every son has the choice of being obedient to his father, or disobedient; and although the father may, as a general thing, by good influences, keep the son from evil ways, the son has the power to choose evil instead of good, if he wishes. He is free, as it were; and although the father may be seeking daily and hourly to find some means by which he may restrain the son from evil, if the son be determined on evil he may fail, simply because we are free moral agents.

Now, of late, in asking myself what prudence and common sense and the Bible dictate, I have received answers something like the illustration I am now going to give you; and in the illustration I am going to use, please bear in mind that I use myself as an illustration, as an earthly teacher, and divine what my attitude toward God should be, by asking myself the question, *what* should the attitude of any son or pupil be toward any earthly teacher? I have before spoken of those lessons Christ gave us, of the need of importunity in prayer, and I have told you, too, that the more I studied this matter of importunity, the more comfort it gave me. How many parents are there who have not, some time or other, wished their children would come to them more, and come to them in an importunate way? I am glad to see my children want things, and it gives me a thrill of pleasure, too, to see them want things vehemently. I am glad to have an employe come to me with wants, and I am glad to see him come with great wants; in fact, it always gives me a thrill of pleasure to see boys and girls who are vehement and importunate—that is, where they are importunate for things that are proper and right. Give me a boy who is vehement and importunate in his desire to get an education, and I feel at once that I have something to build upon—bearing in mind, of course, that his importunity does not come by fits and starts, but that he has a settled determination to accomplish his purpose. In fact, to a certain extent I like to see people have hobbies —not unreasonable ones, of course, but I do enjoy seeing any one stick to a single idea until he develops it and knows all about it. Rather than to see people with no purpose at all in life, I believe I would rather see them intent on making money simply; but, of course, I never want to see the greed for money so great as to overrule a sense of right and wrong.

Well, I am glad to be able to say that I never had any experience in governing a son who was disobedient; but I have had a great deal of experience with boys who were not taught to obey at home. I have watched them anxiously and lovingly; I have prayed for them, and I have anxiously waited for some symptom of a desire to do right. Suppose a boy comes to me and wants work. If I am in need of more help, my first question is, "Do you either drink, swear, or use tobacco?" Very often he admits that he has been guilty of one or more of these acts. But he gives me a fair and square promise to abstain from all, if I will give him a place among our boys and girls here in the factory or on our grounds. Time passes, and I feel a little troubled about him, because I see no positive indication of a very great desire of any thing more than selfish interests, such as

I have talked to you about. Finally as I pass him on the streets I notice something very much like a cigar quickly slipped out of sight as I approach. The next morning I accost him, when I find him away from the rest. "John, are you using tobacco?"

"No, sir, Mr. Root, I have not used a bit."

His words are positive and decided; but his manner is not quite what I like to see. He does not look up frankly and pleasantly, but has an evasive sort of look, and a sort of look that seems to indicate that he is any thing but happy, or the conversation any thing but pleasant to him.

"You give me your word, John, that you have not used a bit of tobacco in any shape since you gave me your promise?"

"No, Mr. Root, I have not used a bit."

Next day I am assured by the foreman of his room that he has been using it right along. What shall I do? It is not only a report that I have from him, but it is his actions that have made me feel troubled about him. But as I do not like to do any thing hastily, I let the matter pass for a day or two. Pretty soon I am informed he has been cheating in his time — not only in minutes, but in hours. What shall I do? This is a question I have asked myself many times, and my best wisdom seems to dictate that, so long as he holds his present attitude there is nothing to be done but to tell the time-clerk, when Saturday night comes, to inform him he is not needed any longer. Some may suggest talking with him further on the subject; but after many experiences in cases like this, I have not been able to see any good from further talk, or following up the matter. So far as I am concerned, I am helpless. If any reformation is to be made, it must commence with himself.

Now, friends, it has seemed to me that our attitude toward God the Father is oftentimes like this. God has done all he can until we show some signs of penitence and reformation. He has gone after us, and has plead with us to turn from our evil ways, until it would be of no avail for him to do any thing more while our hearts are hardened in falsehood and sin; while we resolutely reject, scorn, and disdain his proffers of mercy. The Holy Spirit has been grieved away. The boy who has uttered a square and deliberate falsehood about the use of tobacco will surely very soon after cheat in regard to his time; and, if not caught in the act, will hasten on quickly to some greater sin. Let us follow him a little further. When told that he has lost his place, as a rule he will readily guess why it was, and will not come to me for any explanation. Suppose, however, that I have been hasty or misinformed. In that case he will seek me at once and ask me to know why he is not wanted any longer. As this gives me an opportunity for having a talk with him, and as the act also implies that he wants to do right, I feel at once hopeful in regard to him; for just as soon as he comes to me inquiring what is amiss, then I feel that I can, with some hope of success, do him good. If he confesses his guilt, and tells me a story of temptation and sin, and begs of me to give him another chance, and try again, I feel pretty sure he will come out all right. And here we have a lesson in regard to importunity. There is seldom any importunity where one has calmly and deliberately decided to do wrong; in fact, importunity is an indication of penitence, and a desire to do better, or to improve. In the above illustration I have put myself in the attitude of father, and the young man whom I am trying to encourage in wisdom's ways, in the attitude of son; for the relations between teacher and pupil, and between employer and employed, are like to that — father and son. Those who want to find fault with my illustration may, I am well aware, bring a grave charge against me here; but those who are seeking for the truth, as I am seeking for the truth, will probably not notice any thing amiss in my little story from real life.

Now, friends, when we study the attitude of a disobedient earthly child, and decide, according to the best of our wisdom, what course is best to pursue with him? Do we not also map out, or illustrate, what our attitude should be toward the great Creator and Author of the universe? Can we expect God to listen to or answer our prayers while our lives are lives of falsehood and contradiction? Or if we are persisting in that course which we know to be wrong and sinful, how can we expect God to follow us with the influences of his Holy Spirit, and give us peace and joy and happiness? Still further, if we realize that our lives have been sinful and wrong, and realize that we have been false and unfaithful, what shall we do? Is it not plain and clear, that our first duty is to come to him confessing our fault, admitting ourselves to be grievous sinners, without any merit whatever of our own, whereby we can claim his love or favor? Another thing: Does God want us to come to him after we have been wicked and sinful, and false and untrue? To be sure, he does, my friends; in fact, he always wants us to come to him when in trouble. He rejoices at the opportunity of being able to talk with us; or, if you choose, to be able to commune with us by his divine Spirit, and to thus attract us and guide us in our ways. Do you know what Jesus said? — "For there is joy in heaven over one sinner that repenteth." We never need be afraid that God will be displeased to see us coming again. On the contrary, he has been looking, hoping, watching, waiting; and the loving Savior is always ready and glad to put forth his hands the minute any truly penitent child starts to approach him. The thought of this has been a comfort to me; for I too, dear friends, have sometimes asked myself the question, "Will God want to see me now? will my prayers be acceptable to him, after what has just happened? can he forget it and overlook it so quickly?" Yes, friends, he can and does gladly, oh so gladly! providing you are truly penitent and sorry for the fault; providing you have "set your face like a flint" against that act of wickedness, and have left it off entirely, and for ever. This thought gives me comfort — not only because it is Bible doctrine, but because in these few weeks I have proved it by putting myself in the attitude of a parent toward a child, or a teacher toward a pupil. What teacher is there in the world who would not be glad to see any disobedient pupil coming to him to confess his sorrow for his bad behavior? I know sometimes pupils say they are sorry, and are very ready to make promises; but this is not the kind of sorrow I am talking about. The attitude and behavior of a pupil in a very little time determine whether or no the penitence be sincere.

One more illustration right here in this line, please. A few months ago I became acquainted with a good old farmer a piece out in the country, and finally he became quite anxious that I should take his boy in my employ. I consented, and the boy came. For the first few weeks he had considerable of what boys call "choring around" to do, as new boys often do have. He did not seem very apt nor handy, neither did he seem to be greatly concerned as to whether he accomplished much of what he was doing or not. We tried him in different places. Mr. Gray mildly suggested one day, "That boy had better go back on the farm," as he did not think he would ever be of any use to us. I tried him somewhere else, and the foreman of that department pretty soon suggested much the same thing, and it was not very long before the boy got to be a sort of standing joke among the rest of the boys. He seemed slow and dull and unhandy. I talked to him some, but it did not seem to do very much good. His pay was small, as it always is to start with, but I could not consistently advance it until he advanced a little in his work. I felt sorry for him, and yet I sometimes felt indignant to think he showed so little enterprise and energy, while others about him were full of vim and go-ahead. Surely, said I to myself, he must see how little he accomplished; but it seems he did not; and in my want of charity I let the matter pass until I found him one bright day in June standing out in front of the factory in an idle sort of way, as if he had just about decided to give up, instead of going to work. His sad, sorrowful look then began to reproach me, and I wondered whether he did not think that all he had heard said about my kind solicitude in regard to the welfare of all my hands was not a mistake. I felt a little rebuked; and approaching, spoke to him kindly, and asked him if he was not going to work this bright summer morning.

"Why, Mr. Root," siad he, "there isn't any use; I get hardly enough wages to pay my board, and I do not seem to be handy at any thing."

"Why, X., you would like to get more pay, would you?"

"Why, yes," said he; "to be sure, I should like to get more. There are little boys in the saw-room who get more pay than I do."

"Now, X., I am going to talk plainly, and I may hurt your feelings; but I surely do it for your best good. Have you not observed that those little boys get around and accomplish a great deal more work than you do?"

He looked down, but did not reply.

"Have you not noticed what I say, friend X.?"

"Yes, I have noticed it," said he, finally. He had admitted that he knew he was not doing as well as others, or as well as he might do, probably; and such an admission, dear friends, seems next thing to real repentance. When one can be made to admit that he is not doing his duty as he ought to do, and if he has any desire to improve, he has already taken the most important step in improvement. It was an easy matter for me, while he was in this attitude, to have a good friendly talk with him, and a talk, too, that would strike home and be really helpful, although it might give him pain, and hurt severely.

Instead of going home, as he intended to, he went back to his work. I could see by his look that he had formed a purpose and a determination, and I was not very much surprised when the foreman of the room remarked that something had come over X. Pretty soon others spoke of it; and ere long I was rejoiced to see him slowly but surely becoming master of his business, and taking pleasure in giving free swing to his muscle, while his brightened demeanor indicated that his mind was working healthfully at the same time he was developing his muscle.

After a few short months his wages was nearly doubled; and when he left to go to school during the winter, it was with the understanding he was to have a man's pay when school was out in spring. Now for the application.

It is not by any means always a bad sign to see a person looking sad and sorrowful. Many times we need to look sad and sorrowful; for, you know, "man's extremity is sometimes God's opportunity." The most hopeless class of people in this world are those who are satisfied and unconcerned — those who have no wants, as it were, and those who never feel troubled or downcast or discouraged. How much prayer would there be, if there were no trials for us? and how could God answer prayer, or bless us, or lift us up, as he often does, were we not driven to him? And unless our hearts are in an attitude, and we are ready to listen and ready to reach out longingly for help, how can help come to us? Is it not a fact, then, that the great reason why we stumble along through life helplessly, and without progress, mentally, morally, or spiritually, is because our hearts are not in an attitude where blessing or help can come? Should I go to one of my hands and tell him of his faults uninvited, it might have the effect of making him settle down into a bitter attitude, and do no good at all, because he would not listen, or would not care. You know how often the Bible enjoins a meek and humble and teachable spirit. You know how lovingly God strove with the children of Israel through the Old Testament, to get them turned to wisdom's way, and to turn and give up their sins. He said in substance,—

"Oh turn ye! oh turn ye!
For why will ye die?"

And yet they would neither turn nor listen, nor be taught nor guided. Now, is it not true, dear friends, that we are right there still? Has humanity changed so very much in the few thousand years that are past? Is it not true, that the greatest obstacle in the way of our progress from earth to heaven is just because we refuse to accept that simple little phrase in the prayer our Savior gives us —"Our Father who art in heaven"?

Tobacco Column.

WANTS TO KNOW, YOU KNOW.

I SHOULD like to inquire, not in a captious spirit, but for information, what is your objection to the use of tobacco? I can understand a crusade against whisky, for a blind man can discover the evils of intemperance; but I don't see why indulgence in tobacco is any more sinful than the use of tea, coffee, or any other luxury which is not an actual necessity. C. W. YOUNG.

Stratford, Ont.

Friend Y., I know there are some who claim there are two sides to the tobacco question; but as they are mostly tobacco-users, it seems to me their evidence is not quite the kind we want. We have abundance of testimony to the hurtfulness of tobacco, physically, morally, and spiritually, by those who have given up its use. That evidence I should consider safe, is it not? Those who have not used it may not be able to look on both sides of the question; but they have saved their money, health, etc. At a public lecture a short time ago, the speaker surprised me a little by stating that tobacco was doing more harm to-day in our land than all intoxicating liquors together. I turned to a gentleman by my side who is highly educated, and well posted in regard to matters of this sort, being principal of the public schools of Medina. He nodded assent. After the lecture was over, I questioned him there in regard to the matter. He said he had not a bit of doubt about that statement being true. In surprise, I stated the case to many of the most intelligent and best men I am acquainted with, and the verdict was, I am free to say, to my great surprise, that tobacco is doing more harm to-day than all the intoxicating liquors together. Suppose *you* propound the question to the most energetic, earnest, and honest reformers you are acquainted with, and see what they say to it.

THE NEED OF A CHRISTIAN SPIRIT IN ALL OUR DISCUSSIONS.

In the last number of GLEANINGS, on page 762, you comment on my late letter to you on the tobacco question. After reading that comment, I can only say that I, for one, care not how much you differ with me on the use of it, or how much you crusade and write against it, if it be only done in the tone you, in your said paragraph, use. That tone is gentlemanly, and worthy a Christian; and to such I have no exception to take; but when, instead of argument, or fair remonstrance, I read abuse and sneers, it does cause me to feel a little irritable. I think your comment was perhaps better than publishing my letter, as "grievous words" do very frequently "stir up anger," and there is altogether too much snarling in the world already.

Austin, Tex., Dec. 8, 1883. R. J. KENDALL.

Friend K., may God bless you for these kind words! I confess, that when I read them I felt like saying, "May God have mercy on me for not having shown more of the spirit you commend." I do know and realize that the use of harsh, abusive, and unfeeling words is a greater evil than the use of tobacco—if the use of tobacco be indeed an evil; and I do know, too, that we have no right to dictate to others what their duty is in such matters. Even if you use tobacco, friend K., and think proper to continue its use so long as you live, right gladly I would grasp your hand, and call you brother, even though at the time I did it I might smell the odor of tobacco in your breath; and I would say, give us the tobacco, by all means, rather than the unfeeling words, if we must have one or the other. May God help me to show forth this spirit you allude to, amid all these many and varied cares. Again I thank you for your kind and courteous words, and especially for so cheerfully acquiescing when I thought best not to publish your letter.

A CONFESSION OF FAILURE.

I have been watching the Tobacco Column for quite a while, thinking that perhaps some one would break his promise, and hand over the $1.00; but I have seen no account of any failures. I am glad that I have seen none, and am sorry that I have failed; so, according to promise, I hand you $1.25 to pay for my smoker. Many thanks, friend Root.

Edgerton, Kan., Oct. 22, 1883. W. J. ENDLEY.

Friend E., I am very sorry that you have failed; but I rejoice to know that you are prompt and honorable in the matter. If you will read our back numbers carefully, I think you will find that something like half a dozen have owned up, and paid in the way in which you did.

I see by GLEANINGS you give a smoker to every one who stops using tobacco. I used it for about 20 years; but six months ago I quit using it; and if I ever attempt using it again, I agree to pay you for the smoker. A. V. HARLAN.

Pendleton, Ind., Oct. 31, 1883.

Having seen that you would mail free a smoker to all those who would abandon the use of tobacco, I will promise from this day I will never use the nasty weed again, if you will so reward me. G. H. GROSS.

Tower Hill, Ill.

For three years I used tobacco; but I stopped last March. I hear you send smokers to those who have stopped using. If so, please send me one. If I begin again, I will pay you for it. S. BAILEY.

Kenton, O., Feb. 26, 1883.

I quit chewing about 3 months ago; and if I ever use it again, I will pay you for the smoker.

Pendleton, Ind., Nov. 12, 1883. G. M. HARLAN.

We gladly send you a smoker, friends, with a prayer that God may help you to be successful in breaking away from the bondage of tobacco. Some have written us that they broke off a great many years ago, and wanted to know if they were entitled to a smoker. If I am correct, friends, the arrangement has been to give smokers to all who give up tobacco after seeing this column here in GLEANINGS, and the smoker is a little object-lesson, as it were, to close the bargain and remind them of the pledge here given publicly before all the readers of this journal.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, DEC. 15, 1883.

My meat is to do the will of him that sent me.—JOHN 4: 34.

AN ERROR.

PAGE 620 of this vol. was accidentally printed 520; hence 100 should be added till you get to 584, at which place the proper paging begins.

WE will pay 10 cents each for GLEANINGS for March, 1881. If we can not find them at that price, we will give 15 cents each. If that does not do, I suppose we shall have to offer more than that. We will also pay the same for May, 1875.

IN the Blasted Hopes department, friend Gibbs tells us about increasing from 80 to 116 good swarms *in the cellar*—or, at least, it looks that way, and he says anybody can do it. Very likely they could, if they had money to buy some of their neighbors. But if that is not what he means, we hope he will stand up and explain, and not keep us juveniles in suspense in the matter.

IN my comments on page 745, in last number, in regard to "Olefogy" owning up, I unconsciously fell into an error. "Olefogy's" hobby was, that a natural swarm seldom or never comes off without clustering, and the part relating to restraining them with a comb of unsealed brood was my own hobby. Of course, I have had to own up long ago that unsealed brood does not always answer, while "Olefogy" owns up that natural swarms do sometimes go off without clustering.

THERE have been so many calls for a larger engine than the 4-horse power we have been selling, mentioned in our price list, we have selected a 6-horse power engine and boiler which we can furnish at $425 net. The boiler is wrought iron, tubular, and is a splendid machine for the money. This engine will run a pretty good-sized factory for making beehives, and will, if necessary, run all the machines together, including a planer large enough to plane Simplicity-hive covers.

I SHALL have to remind some of the friends, since we are having so many discounts, that 5 per cent off and 3 per cent off does not make 8 per cent. I know very well that 3 and 5 make 8, but that is another thing. You see, friends, if you take 20 per cent off from one dollar, we shall have 80 cents left; and if we take out an additional 10 per cent from the 80 cents, it leaves 72 cents as the result of taking 20 and 10 off; but the straight 30 would leave only 70 cents. Sometimes on large orders this makes a very important item. Considerable wrangles have resulted from not keeping this fact in mind.

OUR friends have no doubt discovered before this time that this issue of the JUVENILE is rather late in making its appearance. The reason for it is, the labor on small type required by the contents, and also the amount of job work usually received about this season of the year. It is true, it might have been avoided by putting more force on to the work; but as we think we have given you pretty nearly a dollar's worth without this number, we consider ourselves in one sense as a sort of privileged character, and that if we do run behind a little on these extra issues, none of you will be likely to complain very much.

BEES ON SHARES.

MANY are inquiring the proper way to let bees out on shares, so as to have both parties satisfied. I do not know any such way, friends, for the most I have known in regard to letting bees out on shares resulted in both parties being dissatisfied. I have told you what I could about it in the A B C book, but it all depends on what the agreement is; and perhaps you had better have it down in writing. One case I have recently heard of, the agreement was to divide the profits. Well, it so happened that there was no profit, but there was a pretty big loss; and as no provision had been made for this state of affairs, each one felt disposed to put the loss on to the shoulders of the other. I decided it would be about fair to divide the loss; but very likely circumstances might make this not the right way after all.

KIND WORDS.

AFTER reading the proof-sheet of the "Kind Words" page, and finding so many enthusiastic letters of thanks, all grouped together, I confess to a feeling that I do not half deserve it. Another thing: I am afraid that it gives an impression that our customers are all pleased with their purchases, which is by no means true, although as a general thing I try to have them pleased eventually. To tell the truth, that page makes me feel guilty. It may do some good, though, in this way: When any of you find I am not up to the "picture," you will just speak right out and say, "Look here, Brother Root, remember that page of kind words." And, may be, it will have the effect of stirring me up to a sense of my duty; for it is a fact, dear friends, that I do need pricking up and helping up, over and over again; and it is with sadness and sorrow that I say it. I hardly know why I have found so many such very earnest friends, for I am sure that I have done nothing to deserve them.

NOMENCLATURE IN BEE CULTURE.

THE *A. B. J.* for Nov. has an excellent article on calling things by their right names, and gives a list of the terms ordinarily used in bee culture. I would suggest one change, however, and that is, on a frame for holding sections they call it "broad frame" which was the name I originally gave when we first commenced making them; but finding it so often confounded with "brood frame," we changed it to "wide frame," and now invariably say "wide frame" in our price list. You will notice that a single letter would have to be depended on to distinguish between "broad frame" and "brood frame;" and an *a* is so often made like an *o*, there is much danger of confusion. For instance, a customer orders "100 broad frames," and his *a* might be either *a* or *o*. After studying over it, we do the best we can, and send them along; and it soon transpires that he is in a great strait for lack of something that he has not got, and has a lot of frames he did not want. Now, you see if we name them "brood frames" and "wide frames," both short names, too, there is not much danger of confusion.

INDEX TO GLEANINGS,

VOL. XI.

APIARIES AND HONEY-HOUSES.

Honey-houses, 7, 22, 24, 69, 70, 77, 85, 86; railway api., 7; Heddon's api., 16; Ducks in api., 84; Robertson's api., 111; Wire-cloth windows in hon. house, 115, 315; wire screens for windows, 70, 176; legs to hon. house, 184; Wiltse's api., 238; chickens in api., 258, 380, 392; Muth's api., 307; Viallon's api., 435, 474; to build up an apiary, 453; Price's house api., 468; Perrine's floating api., 474; Shirley's api., 561; Wilkin's api., 606; Roanoke api., 612; apiaries near water, 719; Hilton's api., 738.

APICULTURE IN GENERAL.

Apiculture for women, 7, 27, 73, 112, 119. 132, 133, 164, 175, 183, 235, 328, 709; Doolittle's neigh'd, 20, 175; Binding journals, 21, 90; dark side of apiculture, 35, 735; writers for GL., 59, 113, 307; binders for journals, 62, 139; Barnes' factory, 63; who should keep b.? 114, 175, 315; Mrs. Axtell's success, 117, 182, 244; outfit for bee-keeping, 166; honey vinegar, 192, 236, 243, 262, 322, 326, 384, 467; veils, effect on eyes, 195; shorthand, 282, 314; patents on sec's, etc., 305, 367, 371, 398, 490, 507, 545, 600 (see sections); misapprehensions about bee culture, 370; Boardman's success, 437, 636; smoker fuel, 506, 538; breaking down h. market, 537, 556; patents, 600, 614, 673; railroads, 8; careless railroad men, 371.

BEES.

Albinos, 11; do b. visit several blossoms for a load? 12, 262; laying workers among Cyprians and Syrians, 18; b. with shirts, 19; non-swarming b., 30; large b., 32; odorous swarms, 38; b. coming out in winter, 39; hiving b. when high in tree, 40; b. in limbs, without a hive, 68; b. in the house, 92; glass to hinder robbers, 82; how cold can b. fly? 84; two kinds of b. in Miss., 84; burying b., 87; b. in S. C., 88; remembering location, 112, 369; to prevent clustering, 116; b. killed by electric storms, 121; Ark. brown b., 123; watching b. raise a q., 126; moving b. to better pasture, 127, 185*; to kill fertile workers, 131; how far and fast do b. fly? 134, 140, 191, 241, 254, 255, 298, 301, 314, 322, 323, 369, 376, 391, 394, 435, 443, 450, 455, 456, 464, 494, 524, 530, 610, 672, 708; b. to Utah, 134; choosing location before swarming, 146*; b. near large rivers, 150*; b. not swarming for 11 years, 151*; b. that won't sting, 179, 250, 305, 328; when b. are cross, 182*; do b. hear? 184; starting nuclei, 190; rearing brood in winter, 191; b. killing horses, etc., 192; fast'g b., a caution, 194; do b. move eggs? 192, 299; coming b., comic, 213; buying b. by the lb., 231; Miller's statistics, 233; brood-rearing during a dearth of honey, 234; b. hanging out, 239, 460, 540; Secor's coming b., 240, 304; removing b. from cellar, 244, 250, 322; starting b. in secs, 246; Train's imp. b., 249; wingless b., 254; best b. for business, 309; Wiltse on the b., 310; burying b., 325; when to put on boxes, 327; lunatic b., 372; overstocking, 373; b. in honey-h., 378; when are b. free from spring troubles? 379; late brood-rearing, 390; b. stealing brood, 393, 457; to move b., 395; tramp b., 395; behavior with b., 405, 540; what to do with b. when season is over, 440; b. and Sunday, 447, 467, 531, 538, 565, 638, 679, 726, 737, 744; new sw's abs., 456; b. that carry leaves, 457, 569; how many b. make a hiveful, 458; chlo. for uniting b., 463, 758; b. finishing uns. combs, 531; b. hunting location, 533; b. killing moth, 533; b. in parks, 535; to make b. stay, 537; b. transferring eggs, 538, 565, 566, 672; b. 96 years ago, 540; crazy b., 545; putting b. on fdn. in Sept., 545; preparing b. for shipment, 565; b. in the ear, 573; are b. cannibals? 607, 684, 752; b. that won't defend themselves, 608; b. building on top-bars, 609; moving b. north, 609; b. that won't raise q., 610; b. from Italy to Australia, 631; principles of breeding, 637, 759; why do they swarm? 664; b. in the South, 668; apis dorsata, 671, 690; do b. recognize each other? 677, 704; worst robbers, 680; how b. get wax, 681; tame b., 716; Robbins' new strain, 741; strikes among b., 743; robbers, 747; overstocking, 747; are they Italians? 748, 777; bands as a test, 748; do b. need water? 755; can b. hatch in 14 days? 756; moving b. short distances, 757; how long can b. live on air? 778; b. at fairs, 779; handling b. in a dry spell, 781.

BLACKS.

Blacks v. Italians, 13; blacks and Italians, 570, 682, blacks, Italians, and Syrians, 582, 736; why blacks are not as good as Italians, 759.

CYPRIANS.

Cyps. ahead, 42; Malone's views on Cyps., 122; Cyps. and Holy-Lands, 124, 170; Duster on Cyps., 173; toughness of Cyps., 188; temper of Cyps., 195; Cyps., 531, 652; Cyps. in a drought, 689.

HYBRIDS.

Hyb's in Mo., 85; Fox's hyb's, 90; hyb's in Canada, 91; hyb's ahead, 139; hyb's for honey, 173; hyb's and Itals., 183; hyb's from bl'k qs. and Ital. drones, 380; hyb's in Maine, 392; handling hyb's, 438; hyb's v. full-bloods, 540; hyb's for h., 707.

ITALIANS.

Purity of Itals., 374; Itals. v. disease, 537; Itals. v. foul brood, 665; Itals. and hybrids, 707; Itals. against bl'ks, 703.

SYRIANS, OR HOLY-LANDS.

Syrian b. at home, 70; b. in Syria, 167; Syrians in Tenn., 241; Syrio-Italians, 311, 321, 543, 707; Syrians, 392; Holy-Lands, 680.

CAGES.

Candy for queen-c., 58; carpeting cages, 143; candy block for cages, 406.

CHAFF.

Chaff cush., 33; sawdust v. chaff, 253; chaff in Illinois, 258; success with chaff, 325; chaff hives for cold spring, 375.

COMBS.

Moldy combs, 38; movable comb-closet, 69; two thin combs in one sec., 176; drone combs for ext'g, 245; extra combs filled with old h., 336; empty combs, 358; dr. or worker comb for sec's, 374; comb with three layers of cells, 419; attachment of combs, 437, 438; combs built to bottom-bar, 581; starters of dr. comb, 689; value of empty combs, 689; age of comb, 756.

DEPARTMENTS.

Heads of Grain, 30, 82, 134, 186, 252, 320, 388, 456, 536, 608, 680, 754.
Notes and Queries, 41, 93, 143, 194, 261, 330, 398, 467, 513, 559, 618, 688.
Blasted Hopes, 42, 93, 196, 258, 329, 397, 467, 617, 687.
Ladies' Department, 27, 81, 132, 194, 239, 328, 395, 465, 678, 760.
Honey, 4, 56, 110, 162, 228, 296, 364, 432, 499, 518, 583, 590, 626, 698, 734.
Tobacco, 47, 148, 201, 266, 335, 402, 472, 509, 580, 652, 662, 724.
Bee Entomology, 195, 468, 524.
Bee Botany, 144, 303, 387, 453, 631.
Editorials, 47, 99, 149, 202, 224, 267, 292, 335, 358, 402, 426, 473, 496, 545, 582, 619, 690, 727, 760.
Marriages, 284, 687.
Obituary, 448, 619, 654.
Kind Words, 49, 155*, 187*, 221, 290, 356, 423, 510, 580, 625, 697.
Circulars, 100, 151, 203, 269, 337.
Humbugs, 69, 144, 230, 329, 453, 583.
Reports Encouraging, 154*, 259, 397, 466, 498, 559, 652, 725.
Remindery, 48, 62, 148, 201, 232, 375, 558, 618, 654, 688, 753.
Forgettery, 249, 467, 500, 679, 763.
Growlery, 94, 616.
Smilery, 195, 240, 308, 468.
Conventions, 49, 100, 151, 203, 269, 499, 546, 584, 590, 691, 763.
Notes from Banner Apiary, first article each month.
Virgil, 144*, 158*, 174*, 210, 279, 345, 413, 488, 554, 627, 699, 771.
Department for "Goods not there," 567.

DISEASES OF BEES.

Dysentery, 41, 388; new brood disease, 256, 398, 461; dys. and sugar syrup, 755.

DRONES.

Dr. from worker eggs, 18, 171, 366; to kill dr., 286; white-headed dr's, 460; scar. of dr's, 462; drones that sting, 493; drone and q. rearing, 526; art. drones, 602; to stop drone reering, 612; drones building comb, 681, 754; dr's congregat'g to meet q's, 746.

EGGS.

Sex of bee ova, 15; mov'g worker egg to dr. cell, 34; how many eggs from one q.? 218; several eggs in cell, 302; eggs missing, 752.

ENEMIES OF BEES.

Death's-head moth, 70; bee-mole, 138; squeaking moth, 140; removing moth-worms, 149*; foul brood, 171, 235, 256, 446; merops apiaster, 283; mice, 285, 322; flies, 322; mosquito-hawks, 463; king-birds, 609; skunks, 608, 670; roaches, 753.

EXTRACTORS AND EXTRACTING.

Nickel for gates, 92; Jones's improved wax ext'r, 120; ext'g too late, 215; is the ext'r to blame? 327; rapid ext'g, 544; extr'g from brood-nest, 560.

FEED AND DRINK FOR BEES.

Water for b., 81; Scotch water-fountain, 129; scented syrup, 131; maple sugar, 156*, 133; Darr's success in feeding, 161*; salt water, 195; sugar stores v. natural, 229; maple sugar, 240, 595; Simpson's plan to water b., 252; outdoor feeding, 289; grape sugar, 312; gran'd sugar, 322; water for bees, 382; salt water for bees, 390; feeding ext'd h., 492; art. pasturage, 497; feed'g when h. stops, 498; bread-pan feeder, 675; what to feed in Nov., 688; pour'g feed on bottom-board, 759.

FOREIGN COUNTRIES AND DISTANT STATES.

Oregon, 13, 14, 31, 140; Nebraska, 30, 238; Florida, 66, 308, 316, 377, 378, 381, 391, 393, 463, 529, 600; Wyoming, 84; Canada, 121; Kansas, 127; Wash. Ter., 140, 194; Texas, 320, 328; Tennessee, 384, 439; Arkansas, 384; Kentucky, 394; California, 397; Australia, 414; West Indies, 452; Manitoba, 498; New Zealand, 602; North Carolina, 179, 605, 639, 675, 708; West Virginia, 610; Mississippi, 678; India, 685; Burma, 701; California, 714; Cuba, 744; Palestine, 746; Germany, 749.

FOUNDATION.

Home-made fdn., 136; dipp'g sheets for fdn., 150; plain sheets of fdn., 174; paraffine for fdn., 186, 304; old fdn., 217; McGee's fdn. fastener, 236; money making, in fdn., 257; fdn. on plaster plates, 324; worker or drone fdn. for sec's, 328, 445, 543; to make thin fdn., 389; wax and rosin for starters, 393; Easterday's device to fasten fdn., 418; Miller's mode of fastening fdn., 486; putting in starters, 600; drone fdn. for sections, 706.

FRAMES.

Hunt's device for frs., 61, 257; reversible frs., 65; drilling bars for wired frs., 69, 188, Mason's wide frs., 72; Heddon's half-length frs, 74; to remove first wide fr., 88; L. frs. on end for winter, 93; tongs to hold frs., 117; wir'g frs. for fdn., 137, 248, 262; wiring frs. with nails, 189; subs. for wired frs., 324; carpet-stretcher for wiring, 526; spur-wheels for wiring frs., 392; cov'g frs. in winter, 454; to make metal-cor. frs., 485; Hutchinson on metal-cor. frs., 520; the Langstroth fr., 522; wide frs, 536; advantage of wired frs., 539; to prevent fastening of frs., 565; metal-cor. fr's, 680, 706.

HIVES.

Honey-boards of perf. zinc, 10, 35; Miller's sep., 17; hooks from blind-staples, 31; Mrs. Cotton's hive, 65, 464, 535; Controllable h., 65, 464, 535; tall h., with L. fr., 79; patent h., 83, 140; perf. zinc, 85; wood seps., 86 254; trouble with 2-story h., 92; Golden h., 128; dummy on upper story, 141; long tenement h, 154; seps. or not, 180; stone for h. covers, 183; small brood-chambers, 304; wood seps., 254; empty h. under b., 254; obs. h., 281, 419; decoy h., 285, 499, 500; Langstroth on chaff h., 367; tenement h., 382; good points of enam'd sheets, 382; toy h., 415; leaky covers, 421; proper wood for h., 439; Langstroth, 441; to prevent bottom-bars from sag'g, 443; extra entrances, 449; brick h, 505; the Langstroth h., 522; chaff h., 531; obs. h. with 3 frs,, 534; golden h., 560; Mitchell h., 608; Langstroth h. and frame, 613; entrances in winter, 727.

HONEY.

To store and market comb h., 59; selling h. too cheap, 64; adulterated h., 71; candying of h., 91; first h. for 1883, 93; melting candied h., 116; selling h. on com., 118; to market h., 118; thick h., 127; bitter h., 134; apple h. in boxes, 136; h. on the floor, 142; non-gran'g h., 189, 239; black h., 219; broken h., 244; to soften h. by steam, 252, 389; light h. from h.-dew, 256; maple h., 254; to whiten h., 286; purity of granulated h., 320; straining ext. h., 378; Muth on pure h. and glucose, 392; first-gathered linden h., 416; h. in old apiaries, 455; h. for mosquito-bites, 460; poison h., 484; sour h., 529; broken h., 531; fr's of old h., 539; sour h., 544; old way of getting h., 596; wood mats made of wire, 600; sunshine and h., 611; cann'g h. in glass, 612; to sell h., 676; candying h.,680; bitter h.,683,787; h. inCont.hive,685; granulating of h., 742; honey in glass jars, 751; marketing h., 20; selling ext. h., 29; to stick labels on tin, 35; putting h. in crates, 118; giving crates with h., 118; to fill honey-pails, 167; Walker's case and crate, 177; wooden vessels for h., 257; combined case and crate, 315; Burnett on packing h., 319; labels on tin, 383; Stuart's honey-stand, 417; Walker's crate, 368, 445; honey-pails, 542; labels for comb h., 556; tinware for h., 632; Slater's section crate, 709.

HONEY-DEW.

Honey-dew, 32, 85, 93, 127, 180*, 257; h.-d. from sugar-cane, 524; h.-d. in field, 536; cryst'd h.-d., 541, 670.

HONEY-PLANTS.

Flowering maple (see abutilon); monarda punctata (see horsemint); wheat-stubble, 9, 39, 144; melilot, 11; horse-chestnut, 12; gladiolus, 28; Virginia creeper, 31; abutilon, 31, 64, 124, 141; rape, 33; buttonwood, 38; horsemint, 40, 220; goldenrod, 42; silverhull buckwheat, 42; smartweed, 63; Russian sunf., 78, 89, 286; asparagus, 89, 139, 261; alsike clover, 112; to prolong linden, 115; figwort, 120, 137, 188, 261, 451; poinciana pulc., 123, 189, 193, 303; heart's ease, 134, 186, 386; matrimony vine, 135; honeysuckle, 135, 188, 303; hoya, 136; Japan lily, 136; tomato, 142; Molly Heath, 143; snowdrop, 144; catnip, 153; raspberries, 169, 256; gallberry, 179, 187; chestnut, 179; silverhull buckwheat, 180; corn, 184; palmetto, 187; sweet potato, 187; mountain sage, 190, 301; hedges, 194; sugar-cane, 218; willow, 248; hedge, 248; aster, 253; tobacco, 262; basswood, 262, 398, 451, 456, 462, 640; black locust, 239, 385; raising honey-plants, 239; willows, 298, 329, 720; buckeye, 299; mesquite-tree, 303; vetches, 303; sage, 303; to save seed of alsike, 323; honey-locust, 347; vanilla, 377; wild lupine, 387; sundial, 387; milkweeds, 387, 512; primrose, 387; buckbush, 388; sweet clover, 388, 451; apple-blossoms, 389, 456; saw-palmetto, 397; lilac, 398, 467, 569; honey peas, 402; wild cherry, 414; fuchsia, 422; burr-flower, 453; hound's tongue, 454; jack-oak, 502, 544, 759; vine-maple, 503, 644; hemp, 504; water-lily, 505; alsike, 511; sourwood, 537; fireweed, 538; corn, 539; wheat-stubble, 540; alfalfa, 540; parsnips, 543; cotton, 543, 568, 686; cabbage-palmetto, 544; black-oak, 544, 558, 759; weed to poison flies, 544; goldenrod, 560; wax-plant, 569; poplar-trees, 570; aster, 574; Canada thistle, 594; dodder, 604; sumac, 608, 689; prickly ash, 611; basswood bloom in the South, 611; corn, 612; Rocky-mountain bee-plant, 669; aster, 682; Macartney rose, 683; dog-fennel, 683, 787; orange-blossoms, 685, 754; banana, 685; oak-balls, 689; oak-leaves, 704; peas, 707; white sage of Cal., 710; chittim-tree, 715; soporific plants, 760; dhourra, 752; to get early plants, 786.

INTRODUCING.

Simmin's book on int., 130; White's mode of int'g, 312; int. when b. rob, 543; McBride's method of int'g, 544; intr'g to colony having a queen, 683.

MACHINERY, ETC.

Windmills, 34, 57; foot-power saws, 34, 82, 167, 188, 242, 319, 324, 385, 389; fdn. mills, our own, 68, 85; table in honey-house, 82; parallel bars to saw-table, 89; corn-sheller buzz saw, 142; Cook's brush, 231; cut-off saw-table, 236; cider-mill buzz-saw, 242; Malone's power saw, 258; smokers to kill vermin, 262; saws, 403, letter-clip, 488; harpoon for worms, 486; hive-carrier, 607; cart to move hives, 629; Smith's pump, 630; Cook's bee-brush, 666; uncapping-box made of wood, 667; machine to mark boxes, 703; tenexine for solder, 757.

POLLEN.

Pollen from elm, 185; pollen and dys., 191, 192, 304; white pollen, 191; pollen from chickweed, 194; pollen from cottonwood, 286; white pollen, 421, 467; white pollen from plantain, 569; exeess of pollen, 601.

PROPOLIS.

Propolis on secs., 177; poison propo's, 188; prop's to seal cans, 569.

QUEENS.

Rearing queens by electric light, 320; clipping q's, 383; q's that won't lay if not allowed to sw'm, 393; dollar q., Cook's views, 6, 32; preventing q. from going up stairs, 10; three laying q. in one hive, 12; q's hatching in less than 16 days, 21, 27, 31; drone-layers, 81; imported queen from Italy, 81; two q's in hive, 94; q. not laying after moving, 133; q. flying from comb when hive is open, 154*; q's lost on bridal trip, 179; do old q's lead swarms? 181*; two q's in a hive, 191; to clip q's, 211, 285; young q. leading first sw'm, 253; q. losing leg, 253, 326; clipping wings, 285; to raise choice cells, 326; naming q's, 366; q's not following swarm, 375; two old q's in hive, 395, 473; q's that are not q's, 395, 468; q. not laying for 8 mos., 398; hatching q's under a hen, 421; two q's in h., 440, 449; q. stinging workers, 456; color of imp. q's 463; catching q's to mail, 463; q's wrong end up, 464; q's sometimes sting, 487; hatching q's under tumblers, 494; clipped q's, 519, 527; int. virgin q's, 519; Hutchinson's plan with q's 520; drone-layers of clipped virgins, 526; to get good q's, 542; hatching queens in incubator, 571; acceptance of q. in a hive containing a q., 598; q's across the Atlantic by mail, 599, 749; wedding flights, 598; fert. q's taking airing, 598; q's found near entrance, 610; two q's in h., 612; introducing virgin q's, 665; young q's laying dr. eggs, 680; clipping q's, 383 686.

QUEEN-CELLS.

To get q. cells with old q. in hive, 12, 16; artificial q. cell, 16; hatching cells under a hen, 148; queen-c. 9 days in hatching, 394; Alley's plan of rearing, 394; destruction of royal cells, 598; inserting queen-cells, 602.

REPORTS.

First r. of 1883, 93; big r., 88, 91, 139; Davis' r., 542; Hunt's r., 684; marvelous r., 712.

Further reports can readily be found by looking up the name of the person, the State he lives in, or under the department heading of "Reports Encouraging" or "Blasted Hopes." Reports for 1883 are so numerous that any classification further than this would tend rather to confuse than enlighten.

SECTIONS.

Half-pound s., 10, 39, 66, 72, 74, 75, 77, 86, 92, 126, 181, 248; pound s., 17, 116; labeling secs., 48; sec's under brood nest, 129; dispensing with sec's, 136; Walker's imp. in secs., 150; cheap secs., 186; Cal. secs., 320; mildewed secs., 336; one-piece v. dove-t. secs., 368; to tell when secs. are filled, 458; nat. starters for secs., 450; secs., partly filled, 462; Manum sec., 520; aspen for secs., 390, 540; close-topped secs. 565; to remove secs., 611; secs. during honey-flow, 611; veneer secs., 626; close-topped secs., 686; one-piece secs. made in 1876, 689; home-made secs., 709.

STINGS.

Stings for neuralgia, 93, 140; stings in the eye, 185; stings as a remedy, 254; stings, 323.

SWARMING.

Smoke for s., 11; sw'g at night, 30, 42, 123; sw'g too early, 30; bushes for swar's, 87; how Shepard stops abs. swarms, 90; smoke for s., 90, 189; uns. brood for new sw's, 91; bee balm for sw's, 116; setting hive in tree, 150*; sw'g in large apiaries, 164; hiv'g sw's with clipped q's, 179; hiving bag, 193; to prevent sw'g, 213; to make sw'g convenient, 232; to find bee-tree, 241; do sw's issue without clust'g? 242, 299, 305, 322, 325, 326, 327, 330, 369, 371, 383, 390, 392, 458, 464, 543, 558, 613, 687, 741; sw's in honey-h., 244, 382; sw'g too early, 257; abs. sw's, 298; mirrors in sw'g, 299; sw'g with 2 q's, 299; settling sw's with mirror 299; sw'g in May in N. Y, 306, 391; sw'g in rain, 349; sw'g with clipped q., 374; sw'g prevented by more room, 379; why new sw's go off, 380; energy of new sw's, 386; smoke for high sw's, 389; baskets for hiving, 392; uns. brood not a preventive against sw'g, 394, 526, 609, 686, 703, 745; sw'g without q., 394; watering with syringe, 394; sw'g-baskets, 404, 519; bells to stop sw'g, 419; hiv'g 5 times, 447; hiving bees where they cluster, 447; sw'g in the rain, 458; to prevent abs., 461; swarming when cloudy, 467; hiving-boxes, 601; to make art. sw's, 512; nat. sw'g preferred, 519; abs. sw's, 527; automatic sw'g, 572; sw'm through a swarm, 575; an old swarm, 585; persistent sw'g, 676; Shepard sw'g box, 682; to prevent sw'g, 686.

VENTILATION.

Vent'g hives for comb honey., 78; upward ventilation, 188; stopping upward vent'n, 322; bottom vent'n, 354; draft thro' hive, 382; sub-earth vent'n, 380, 384; Grimm on ven'n, 492; ven'n for comb h., 512; vent'g for comb h., 601; lower ventila'n 740; bottom vent'n, 756; downward ventilation, 758.

WAX.

Raising beeswax for market, 67; Hatch's exp's in wax, 125; paraffine with wax, 242; refin'g wax, 302; wax instead of h., 457; solar wax-extractor, 521, 669.

WINTERING.

Hutchinson's clamp, 5; quilts, 17; wint. in cellars, 28; cellars of concrete, 83; flax straw for chaff, 84; subst. for enam. cloth, 90; runn'g water in cellar, 111, windbreaks, 134, 300; cellars ahead, 135; Doolittle's cellar; 172; water in winter, 172, 247; sub-earth vent'n, 172; wintering under snow, 181*, 193; leaves for wint'g, 186, 313, 321; sugar syrup for wint'g, 257; bee-caves, 262; wint'g till pollen comes, 318; clamps, 322; cleans'g flight in spring, 324, 395; spring packing, 365; porous covering in spring, 382; wint'g in Simp. h., 391; preparing for wint., 532; wint'g without upward vent'n, 597; Hasty's experiments in wint'g, 674; Gough's plan for wintering, 684; Fisher's mode of wint'g, 755; winter'g on large scale, 303.

LIST OF CONTRIBUTORS
TO
GLEANINGS AND JUVENILE FOR 1883.

Names with a * are in the Juvenile.

*Abbott V V, 181; Adamson J, 49; *Adkins I, 186; Addenbrooke W, 191; Adair N, 218; Adair G D, 609; *Ainsworth H D, 187; Atchley A J, 219; Atchley E J, 222; *Auchampaugh E, 184; Aspinwall J, 189; Alexander D L, 393, 467; Allender J H, 335; *Alverson J, 147, *150; *Alvis W E, 147; *Alexander C B, 148; *Alvis H A, 166; *Alshouse J P 182, 221; Allhands W, 188, 613; Alden G J, 193; Allyn Dr. H S 262, 292; Alley H, 395; Axtell Mrs S J, 119, 182, 239, 244, 379, 543; Axtell, L C, 258; Alvis J E, 501; Ackeman J, 560; Allen L, 687; Ayars D C, 665; Andrews T P, 234, 261; Andrews J M, 249; Angell W D, 260; Amberson J W, 571; Arwine E D, 347, 715; Ashmead T G, 756; Atkinson J P, 393.

Baldwin Laura E, 788; *Bailey I M, 185; Balch W H, 223, 252, 389; Barclay W S, 231; Barnaby Mary, 216; Barber J A, 247; Bannon J, 262; Bannon Ola, 788; Barrington Mamie M, 286; Baldridge M M, 306, 372; Bauernfeind J H, 402; Baumann C L, 438; Bartram L H, 467; Bartholf T W, 753; Berryman W, 755; Bliss W W, 782; Black J A, 725; Black Ettie, 286; Bliss Z, 290; Blanton Dr O M, 372, 397, 402, 498; Blanck E K, 465; Blackman E B, 725; Blaize Mrs M R, 781; Blaize Est H, 787; Bedell Mary L, 350; Bedell Edith, 350; Bennett Ira, 595; Barb B F, 32; Barlow Horace L, 49; *Baines Charlie, 148; Baldensperger Ph J, 70, 746; *Barger Olla E, 166; Barrett Mary E, 169*; Baker Frank, 136; Bellamy Chas, 141; Bassett D S, 148; Baker J C, 143; Bashore Jno G, 182*; Bennett C M, 155*; Behrens F, 94; Best D E, 141; Bechtel Susie D, 180*; Beeler C H, 192; Belleflower J V, 253; Benton Frank, 283; Beaton Jas, 291, 324, 466; Binns D, 37, 146*; Birchard Dwight, 217; Bingham T F, 256; Bishop Wm, 330, Bingham J G, 540; Bliss W W, 754; Blaize Mrs M R, 579; Blakslie C G, 84; Bloom Mintie S, 163; Blair Jno, 136; *Black G D, 187; Blanchard Bertha, 217; Black Mrs Thomas, 210; Blacklock Robert, 260; Blood A H K, 443; Boyd C H, 42; Bosserman Angie, 149*; Boos Harry, 151*; Boomhower F, 72, 309; Bosserman Wm D, 166*; Bostwick C L, 180; Borton Fannie, 214; Boyd Sylvester 216; Bowles Chas, 393; Bolin James, 463, 544; Boardman H R, 437, 536; Boggs Geo E, 466, Boyd R M, 467; Boyd John 498; Bowers A, 788; Brandon Stella, 788; Brooks W S, 618; Bradley James E, 552; Briggs Katie, 786; Bull Edw, 606; Bull Joshua, 608; Buchanan J A, 612, 752; Bullis F E, 569; Butler S S, M D, 572; Burrow J H, 581, 583; Brown Oliver M, 41; Bradley J W, 41, 242, 308; Briggs Geo, 41; Brush Albert 155*; Brown Mary V, 163*; Briggs Everett W, 143, 148; *Brichner Sidney, 179; *Brichner Annie, 179; *Brechbiel Sarah J, 179; *Brubaker J J, 181; Brooks E S, 187*, 541, 570; Bryan A, 193; Briggs C C, 195; Brown G W, 196; Bryan Nettie, 214; Brubaker D E, 319; Brown J McL, 387; Bright W H, 472; Brooks J M, 498; Bunker A, 685, 702; *Bunker Dora, 148; Butler S S, 110; *Bundren Lily O, 180; *Bull Jessie H, 181; Buttolph C M, 251; Butler J, 254; Burdick H D, 237; Bulair D I, 262; Burrage J H, 266, Butt Anna B, 285; Buckley B, 287; Bucklew J A, 458; Butters D, 291; Burnett R A, 319; Butler J, 321; Burr E, 468; Buck C W, 541; Byrns Maggie A, 396.

Carroll J N, 34; *Carson L, 155; Carr S, 179*, 220; *Case Annie V D, 183; *Case Hattie L, 183; *Caldwell J W, 184; Carson L, 170; Case B, 175; Callahan C S, 188; Carder A, 195; Carmikle C, 284; Carr S B, 285; Cade Bertha H, 286; Cameron Annie, 288; Calvert G H, 290; Carnes & Falkner, 320; Clark A N, 498; Clark F D, 11, 49, 221, 258; Clark Lucy, 215; Clark J W, 262; Clark A M, 320; Clarke W F, 458; Cox J H & Sons, 87; *Cox A, 155; *Collins E S, 155; *Condon Josie M, 148; Cook, T J, 21, 223, 231, 468, 727; Coleman W, 41; Cowles Carlie, 41; Cook A J, 42, 235, 303, 524, 691; Cochran Mrs J A, 49; *Coblentz Mattie, 148; Cree G W, 39; Crosier A R, 538; Crittenden, 687; Craycraft F, 716; Culp Mrs H, 28; Cuyler R, 201, 467; Culp Jennie, 239; Currens H F, 291; Culver F A, 348; Culp W H, 559; Carroll B F, 440, 726; Carr C M, 325; Cauthen W S, 330; Cater G A, 335; Casper Annie, 348; Carpenter H F, 397; Case John B, 464; Carr W, 535; Carman H W, 536; Carpenter WH, 755; Cameron A, 725; Cork G, 704, 754; Crowfoot J, 466; Crowley W J, 552, 612; Cutshawl J H, 753; Cyrenius F H, 330, 757; Cline John, 371, 467, 509; Clark Guy, 466; Coons F S 499; Coll Mrs E E, 500; Congleton D, 537; *Craycraft F, 154; Crossman Mrs E M, 81; Craycraft J, 83; Cree G W, 144; Craig Frank, 214; Craig Maud, 214; Cross E, 222; Crooks J R, 458, 618; Crafts E E, 705; Chace C E, 443; Chaddock Jessie, 417, 563, 543; Church J J, 94; Christie A, 119; Churchill E P, 139, 321, 392, 708; Chapin E E, 221; Chapman Inez, 285; Chapman T S, 453; Cheney A W, 609; Cook T J, 459; Cooley O E, 88, 325; Coombs, Florence E, 168*, 218; Cook A T, 143; Collins A, 143; *Cowles C C, 180; *Cornin W, 181; *Coleman J, 184; Corey A, 190; Cook A J, 195, 252, 256, 398; Corbet W B, 221; Collins E S, 222; Cook E J, 222; Cole G W, 223, 260; Coffroth & Ruppel, 230; Coate D J, 260; Corbett J W, 266; Coe May, 286; Cook E H, 330, 394; Coleman Mary B, 350; Collard F R, 453; Corbett J N, 457; Coon O E, 498.

Dadant C, 8, 542; Damkohler G, 32, 377; Davis H A, 134; *Davenport E B, 184; Davis T C, 188; Davis J E, 191; Davidson A S, 243; Day R, 288; Della T F, 16; Denham R M, 32; *Deyo Alice I, 152; *Dennison G S, 155; Delono G, 93; Deisher W K, 139, 467, 607; Decker T, 195; Denman G H, 290; Decker F, 290; Devol W S, 453, 531; Deadman G A, 534; Dixon C M, 9; Dimmick H V N, 33, 89, 167; Diehl P, 41; Dickson M A, 47; *Dickens Anna, 152; *Dickens Mina J, 152; Dieffenbach J, 291; Dillahaw J A, 611; Doolittle G M, 24, 75, 134, 172, 176, 250, 395, 451, 526, 599, 573, 744; Dolson H F, 39; *Dodd Martha, 179; Donnelly Mrs, 195; Dotterer Harry B, 288; Doolittle G M, 304, 376; Donnelly L C, 554; Daniels H, 381; Dallas J, 456, 580; Davis O S, 542; Davis Myrtle A, 348; Davidson F M, 460; Devenport R, 689; Dickerson C A, 725; Duncan Sarah E, 27, 239; *Dumont W E, 147; Dum W R, 135; DuBois, W D, 222; Dutton G E, 248; Duff A H, 255: Dunford R, 540; Duffin G E, 618; Duncan Belle R, 553; Dwyer T C, 402.

Easterly L A, 69; Eaglesfield E C, 134; Easterday E S, 189, 418, 705; Earnest Hattie, 216; Earnest Bertie, 216; Eaton C M, 552; Eckman J W, 455, 553; Edward K, 15; Edmundson E, 31; *Edwards W, 148; *Edmiston Ella, 180; Edwards A L, 255; Edmiston D G, 534; Edmunds R, 758; Eilenberger A F, 133; Ellingwood J J, 31; Ellsworth E S, 41; *Ellis J, 149; Ellison W J, 88; Eldridge J H, 94; *Ellenberger Gusta, 166; Ellis W, 388, 495, 543; Epperson J M, 41; Eby J H, 498, 539; Erwin J, 191; England D, 544; Ewing E E, 314, 539, 709.

*__F__aris B G, 183; *Faris Fannie M, 183; Falconer W T, 230; Fausnight Caroline D, 289; Fales N W, 397; Facey J O, 539, 607; Fallwood C, 531; Ferguson W H, 94, 392; *Fetrow Cecelia, 163; *Fetrow J, 163; Ferguson Matie D, 348; Ferry Dr J E, 447; Fisher E C, 755; Flanagan E T, 474; Flower W E, 13; Flansburg G J, 77; *Fleming E, 184; Foster O, 26, 124, 320, 398; FowlesC, 41, 65, 584; Foreman A L, 84; Fox S C, 90; Foulks E S, 139; Fradenburg A A, 12, 70, 140, 308, 440, 461, 545, 666, 569; Francis W H, 39; *Frick Lizzie, 147; France E, 83; Froscher E A, 166; *Froscher Carrie B, 166; Frith J E, 121; Frosch J, 144; Fraser Bella, 286; France C H, 327; Froscher A, 397, Franke H, 398; French L, 464; Frost W H, 552; Freer Valentine L, 552; *Field Ida, 151; *Fischer J, 155; *Finch Children, 161; Fields V J, 177*, 216, 487; *Fischer F, 183; *Fisher Lela, 183; Fisher Stella T, 438; Fitzgerald J G, 389; Fiddis A, 490; Fish W G, 536; Fleming H, 193; Flansburg G J, 222; Flory J F, 540; Floyd A, 608; Fletcher J F, 567; *Foote May, 153; Fox R J, 192, 391; Footer J, 217; Foulks E S, 222; Fogle J G, 288; Fogy Old, 398; Fowler W, 543; Fooshe J D, 543, 686; Fuller W, 222, 252; Fuchs H, 287; Fultz W S, 269, 704.

Gates G W, 69, 188; Gastman E A, 92; Garwood C, 291, Geiger W F, 187*, 330; Gerow W S, 583; Gibbs E P, 35, 782; Gill M A, 142; Girdwood N, —; Givens L R, 397; Glazier H E, 215; Glisan Lizzie 219; Green E Z, 33; Graves C A, 38; Gray J W C, 84, 195, 257, 447; Green J A, 151, 186, 243, 383, 446, 463; Good I R, 169, 241, 398, 462; Gould Mary E, 215; Gough Katie, 284, 501, 719; Goodspeed C M, 323; Gough C L, 558, 584; Gould R E, 720; Graves E M 685; Gray E J, 402; Graves W H, 251; Gray J L, 260; Griffith Julia A, 285; Griffin Harry, 290; Grimm G, 492; Gray Anna, 291; Greer W H, 322; Gregory J K, 335; Gray L, 456; Griffith M, 582; Groos G H, 724; Gunn T A, 253; Guisinger W, 286; Gulley Jessie, 505; Guiler Violet E, 505; Guiler Mary A, 505; Guyton J W, 759.

Haskins J, 134; Hammerschneider S, 143, *Hardin W, 178; *Hall L, 179; Haught Mary S, *180; *Hansford E, 181; *Harris Lottie M, 182; *Harris Freddie J, 182; *Hall Gertie S, 183; *Harrington B, 186; *Hammerschmidt L, 187; *Hambly D F C, 187; Hammond W A, 194, 492; Haines E J, 221, 260; Harvey J K, 253; Harwood W C, 259; Hassett B, 262, 456, 463, 512, 537; Hasty E E, 280, 346, 413, 488, 555, 598; Harbin J W, 286; Hallett Bertha, 289; Hasbrouck J, 322; Hardin J, 326; Haskins J, 327; Hayes H C, 349; Hayes R C, 350; Holyfield J H, 191; House W B, 231, 246, 259, 393, 466, 544; Hoover J T, 261; Howard A, 284; Hobson Mary, 286; Holcomb E G, 325; Hout D, 348; Hollenbach Geo L, 498; Holley S G, 501; House L M, 502; Hoey Thos 510; Hobler G, 712; Harrison Mrs L, 7, 146*, 64, 160*, 112, 140, 167, 235, 284, 306, 415; Hasty E E, 19, 144* 66, 158*, 115, 176*, 211, 400; Hall A M, 31, 329; Hall L, 31; Haines L, 35; Hallup L G, 149*, Harsh Mintha, 151*; Hall Edith M, 154*, 289; Hall T S, 58; Hasty Wm, 84; Hartry Wm, 89; Hake Albert, 94, 397; Harrold V, 163*; Hahman F, Jr, 124, 193; Hatch C A, 125, 291; Hadley Mrs S P, 133; Heddon Jas, 74, 114, 175, 315, 373, 445; Herr Wm C, 143; *Heffelbower Bennie, 180; *Heffelbower Eddie, 180; Helber J, 195; Holmes W C, 41; *Houston Lily, 147; *Hobbs J M, 150; Hopkins C F, 93; *Hoover Millie, 163; *Hower M T, 163; Hocket C P, 166*, 398; *Holmes R, 167; *Horton Gracie M, 168; *Howard Geo P, 171; Holtke Fr, 123; *Holmes Mattie E, 177; *Hollenbach E, 179; *Howard A W, 182; Hopkins Bret, 185*, 505; Hutchinson W Z, 5, 57, 111, 164, 229, 297, 366, 435, 519, 592, 604, 663, 735, 747; Hughes J S, 18, 21; Humphreys S M, 36; Hunt M H, 49, 180*, 689; *Hudson Nellie M, 149; Hudson May, 786; Hunt E, 62, 89; Hunt T, 71; *Hughes J E, 163; *Huffman Jakie, 169; *Huffman Lizzie, 169; *Hubbard Nelson, 171; *Hunter L, 180; Hunter Ina Isabel,* 180; Hubbard D P, 168, 467; Humphrey W C, 169, 544; Hudson M L, 187; Huston A H, 201; Hughey J L, 260; Huston S B, 288; Huston J, 755; Huber C H, 290, 781; Hunter A R, 321; Hunter W W, 531; Hunt W A, 584; Hutchinson H L, 685; *Hixon E R, 147; *Higgins May E, 151, *Hills Wm, 155; Hilton Mrs J, 155*, 714; Hill J, 139; Hilton G E, 180, 738; Higbee Sarah, 216; Hickson Emma, 220; Hildebrecht T, 222; Higdon W D, 328; Hickok S H, 393; Hill Genevieve, 506; High W L, 537; Hicks C M, 688; Hockett C P, 393; Hotelling M V, 456; Harrison Mrs L, 369, 491, 557, 605; Harrison G W, 454; Harris M J, 459, 544; Harris W, 511; Hassett B, 540; Hayhurst E M, 542; Henderson W P, 543; Harrison Hannah, 724; Hewitt M, 256, 537; Hershey E, 330; Heckman E D, 391, 689; Hemsworth John, 498; Heichert I A, 544; Head T J, 563; Heisler Robbie, 718; Heard J E, 689; Hartenstine J B, 390; Harriman H A, 392; Harris J M, 444, 375; Haskin S D, 448; Hatcher Emma, 502; Harding F S, 538; Harnden Ed, 564; Hayner A J, 610; Hasty E E, 528, 574, 701; Hay Hattie A, 718; Haines C, 719; Hayes F A, 740; Hyatt G, 689.

Idyle Jane H, 140; Israel Chas E, 218; Israel Emma M, 286; Israel J P, 286; Itzenhouser L W, 258; Imhoff C P, 36; Inman C M, 168*; Inghram U G, 215; Ives A, 544;

Jarret J E, 143; Jackson M A, 257, 281; Jaynes W B, 460; Jeffrey H L, 64; Jerry M, 143; Julian S, 260; Johnson J, 47; Jones D A, 67, 120, 381, 495, 532, 758; Johnson S S, 135, 388; Josenhans O G, 136; Jones F W & Bro, 290; Johnson J W, 290; Johnson D H, 453; Johnson Anna M, 785.

Kaiser J M, 87; Kendel A C, 232, 460, 703; Kennelsbrook J D, 560; Keyser J W, 689; Kessler W W, 763; Kennedy G W, 584; Keene J E, 525; Keene, Mamie, 502; Keeney V W, 390; Kepler D, 35, 190; Kennedy J A, 92; Kelley, Mrs N, 194, 222, 291, 396, 511; Kendall C W, 194; King W L, 82, 186; Kirk A B, 462; Kingsbury C M, 782; Kingsley C, 222, 385, 440, 526, 665, 668, 758; Kingsbury H S, 248; King Rachel C, 285; Kincade Minnie L, 349; Kincade Ella, 349; Kime G P, 689; Klar A L, 67, 689; Kline J F, 458; Knight H, 120; Knowlton M E, 189; Knightly Emma, 288; Koontz A, 689; Koser Anna E, 348; Kruschk J D, 392; Keusthardt Rev S, 329; Kuntz J S R, 348; Kuehne M R, 498; Kuster Mrs S W, 685.

Langstroth L L, 367, 442, 523, 614; Landreth D & Sons, 392; Lamb G H, 472; Larsen Bertha M, 487; Lawrence J J, 494; Lay J G, 559; Latham JF, 602; Langstroth L L, 615, 738; Lay J R, 553; Lane S H, 38; Laughter W P, 196, 325; Lawson G, 215; LaBarge Una, 215; Langdon Herbert, 221; Larsen N, 222; Lamb J W, 260; Lane A J, 260; Lazenby W R, 303, 287; Leyvraz A, 187; Lehman A L, 221, 259; Lewelling J, 262; Lee Fanny Edith, 350; Lindley Mrs N, 281; Linswik Cyula, 73, 165, 405, 466; Lindley J R, 83, 577; Livingston A, 85; Little B F, 128; Little W, 138, 248, 330, 553; Lindley B F, 128; Lovejoy R P, 36, 257; Lindley A L, 299, 756; Lindley C V, 385; Lincoln L C, 398; Luff G, 82; Luckey M A, 94; Luckey C S, 402; Lupe A R, 553; Ludtman M, 757; Lechler G W, 397; Leach S S, 559; Leitz W, 618; Liston E, 139; Light Jennie V, 179; Lockwood Mrs C S, 194; Logan W S, 303; Locie W W, 350; Loukes N T, 414; Lord M S, 472; Lochbaum A, 472; Loomis E, 498; Long E C, 539; L'Hommedieu D E & Bro, 240; Lock Mrs N C, 613; Lovejoy D L, 685; Lytle G E, 330.

Malone Wm, 29, 87, 122, 187*, 258, 581, 754; Mallory S H, 33, 686; Mason J, 36; Mason J B, 42, 72, 79, 85, 170; Mason Fred G, 170*; Margrave J W, 127; Mason W S G, 166; Mason A B, 185, 195; Male J P, 188; March H E, 212; Mason G, 215; Manning W, 217; Manning C, 218; Main J, 222; Marshall S, 262; Marsh J B, 323; Mays W M, 394; Martin A L, 398, Matthew C, 567, 758; Mason W S G, 616; Martin J H, 618; Martin S B, 781; Macomber D H, 687; McCorkle M D, 30; McCoy L, 42; McNichol Robt T, 147*; McCrory M* 149; McPhedron J M 129; McKeon J 148, McCurdy A 181*; McNeill J 191 306 781; McReynolds R 215; McKarney J P 215; McCrory R 257; McCullough F 285; McKissick G 285; McClelland F S 322; McKechnie A 330; McBurney Jennie 349; McGee G H 388; McFadden C H 397; McLeod D C 466; McGonnel J 491; McKenzie D 538; McQuiston S G 544; McBride V 544; McFarland J 559; McMahon Mrs B 579, 760; Metcalf L, 290; Mendel I, 544; Mellen R H, 77, 173, 318; Meyer A, 83, 187*; Mead G G, 84; Merrimen J C, 291; Merkle R, 302; Miller C C, 17, 26, 41, 89, 233; Mishler J C, 36, 395; Michener Ila, 83, 321, 707; Miller A C, 92, 486; Miller W L, 189; Mishler D J, 218; Minor F L, 249; Miller E S, 221; Miller C, 289; Miser Minta, 350; Michener Ila, 374; Miller P D, 461; Milligan S H, 543; Mitten A G, 572; Mosher Mrs A C, 27, 81, 133; Morris H M, 66, 398 455; Moyer P 85; Morgan E A 87; Morris B 93; Moss F 94; Moss S H 725; Mowbray W 135; Moore J P 144; Morris H O 171; Moore Maria B 214; Morrison H 214; Moon B 219; Morrison M M 221; Morris Cola 254; Motlaz 260; Morris H B 261; Morgan E B 327; Morrow Co. Beekeepers' Ass'n 389; Moyer H M 543; Morris H M 540; Morrison S W 556; Muth-Rasmussen W 90; Muth C F 143 171 234 392 536 757; Murphey M W 259 335; Mullin J H 467 472; Myers J 35 115; Myers J H 261 262.

Nash R I 531; Newman S F 41; Newman J C & Son 92; Neld C W 217; Nebel J V 217; Nisbet A R 222; Nipe J 261; Nicholas Nellie 287; Norton A 190 405 439 535 607 689; Norris A J —; Nottee E 326.

Oatman Bros 554; Oren J 185 467; Osborn J A N 42; Osborn A B 142; Osburn A W 310 456 527 665 744.

Park A I 330; Parish O B 472; Partridge J G 543 689; Park L B 564; Palmer F A 136; Parmerlee W 137; Parsons F E 222; Pardee S 260; Pattee G 262; Perry S C 42 180 228 584; Peck W S 49; Pettit S T 82 167 742; Phelps R H 94; Peters G B 123 384; Peer H 142; Pease H H 148 494 583; Pearce I D 390; Petitt Esther 416; Peoples G 467; Perkins J 543; Perkins R B 554; Phelps R H 94; Philp G R 215; Phelps T R 221; Phin J 301 330 391; Philow W J 498; Poppleton O O 300 326 495 522; Pond J E Jr 313 315 321 464 466 532 566; Pond G H 571; Post B 686; Pitzer E W 41; Pickup E 143 195 258; Pickles Alice 596; Pitzer E W 618; Prentice N E 260; Proper Mallie 286; Price F E 468 472; Pryal W A 605; Proctor W H 582; Pressley B L, 188; Provan A May, 288; Pryal W A, 301, 710; Pugh J N, 32; Purdy Katie, 348; Porter J L, 37; Porter J W, 86, 305, 383; Potts W E, 93, 394; Pontius A, 168; Pouder W S, 166; Pollard May, 214.

Quinn R, 143, Qualle M K, 397.

Ray F, 136; Rainey W S, 137; Randall H 524; Reese, Gertie, 163; Rees, Rev J M 192; Reizie D W, 223; Reuch A, 259; Remender F, 266; Rhodes R H 260; Rians W 216; Ribble G 220; Rice B E 259; Rickerd T 261; Riebe J R 319; Riggs T L 458; Ridenour J B 463; Richards W A 525; Rossiter Nellie L 784; Robbins G F 778; Robbins R B 7 128 144 741; Rose Mrs H M 28; Roese S 76; Robertson W S 85; Rolwer J H 195; Ross D 201 393 402; Roe E S 214; Roseberry J W 222; Ronald Anabel 222; Roderick J H 290 328; Ross J W 323; Robinson E A 326; Rontzon D C 328; Robbins G F 387; Roote Mrs L B 484 562; Robertson L A 500; Root E R 567; Robson A F 600; Rouse W 611; Roddy S P 612; Russell O G 49 610; Russell W G 781; Ruggles J E 93; Rue C H 144; Ruger Mrs M J 221; Rusks A 286; Ruger F E 287; Ruland C M 488.

Savage D F 24 281; Sample C J 78; Say H H 142; Salisbury & Co B 143; Sadler W A 214; Sadler C F 215; Sanders N A 221; Sanford C J 389 459; Salisbury S W 544; Schmadaker H W 493; Schafer G A 533; Schuddemagen J 617; Schrifterknecht E 543; Scaife Ann 28 171*; Schrock H J 374 457; Scott W 463; Schafer J F 467; Seitz W 143; Schwerdtfeger L C 487; Segars M 255; Secor E 240 557 709; Seccomb J S 330; Seaman S B 438; Seaman May 786; Searcy W E H 461; Shephard S P 529; Shepard Mrs M A 579; Shultz L O 178; Shoup Stella 214; Sheldon L H 242; Shult Carrie 288; Shafer Dennis 290; Shirer G R 390; Shirley W H 392 561 612; Shotwell A T 435 458; Shedd W H 447; Shaw H 457; Shaddock J 563; Shumaker L M 601; Sheldon Mrs L 612; Sheldon J A 612; Shangle D 129; Shield W 42; Shuck S A 150 184 255; Sills J 94; Singleton Ida 186* 415; Simpson J A 252 261; Simpson J 287; Simpson Louisa 499; Simpson R 688; Simpson H A 724; Smith W A 259; Slater F A 710; Smith F D 260; Smith E E 291; Smith L P 402; Smith E B 87; Smith F C 91; Smith Mary 93; Smith C H 140 553; Smith F W 148; Smith C H 181; Smith E E 254; Snider R 28; Snyder F M 126; Snearly J S 187 222; Southwick E B 256; Somerville J 324; Soliday B F 384; Soules W L 579; Sprenkle E 348; Spracklin A W 189 544; Spear D 451; Spencer M L 494; Spencer D J 93; Stringer D C 39; Stites M L 786; Stallard Mrs C L 466; Stimson C 500; Stanclift Anna 528; Stephenson J W 545; Stephenson HSG 599; Stevens SL;555; Stebling AH 578; St Martz W 687; Stout L 689; Stewart H D 690; Stevenson G 602; Stanley I H 760; Stevens J 47; Sturwold J W 62; Stanley G W 126; Steddom J P C 189; Stoner Jane E 218; Steger Cora F 216 287; St. John Z D 222 256; Stoner W S 262; Stickle E J 786; Steger Evil L 286; Stair A P 329; Stranbo Mrs A P 330; Steen Edie 348; Stout Dora 349; Stout Lenora L 349; Stevens F W 466; Suesberry S W, 134; Swan J T, 93; Swartout J J, 127; Swartz C L, 261; Swinburn E K, 468.

Talbert M, 41; Tatman M F, 63; Taft J W, 93; Taylor W W, 134; Taylor R C, 148, 179, 188, 222, 266, 322, 449; Tadlock J S, 187*, 330; Taylor S L, 201; Tarr E, 221; Taft J M, 222; Tate J, 443; Taber M F, 544; Tapley Mrs M A, 538; Taylor R C, 498; Temple J F, 299; Temple B B; 388; Timmerman F, 87, 298; Timmerman, W S, 186*; Till W H, 348; Tillinghast B, 349; Thayer A J, 584; Tharp W D, 576; Thornton J A, 30, 755; Thompson C R, 41, 529; Thom J C, 42; Thompson Wm, 49; Thompson Katie, 216; Thornburg Magnola, 219; Tharp J E, 262; Thompson F W, 335; Thomas J W, 390; Thornburg J H, 554; Torrey D M, 91; Townsend J B, 143; Tobother L Ida, 452; Townsend F E, 484; Tobias A W, 688; Trueblood A, 539; Tricker W, 559; Trimble Willie, 181*; Train H V, 243, 249; Travis F G, 281; Treat F, 559; Turner J C, 255; Turner Katie, 236; Tuttle S D, 348; Tweedy D H, 466.

Uhl C F, 462, 559; Umhols Jno, 398; Unsworth A, 94; Updyke J, 143; Uphaus C F, 339; Utter J W, 42, 639.

Vail C, 135; Vanoy R M, 166; Vankirk L W, 330; Vergason J F 223; Veach B, 756; Vredenburg J L, 117; Viallon P, 435.

Warren M E, 13, 140; Warner W, 42; Walker B, 59, 178, 193, 368; Washington T L, 135, 303; Walker J W, 190; Wagner Emma, 214; Watt J, 223; Walcher, J E, 255; Wagner J H, 262; Washington Mary L, 287; Waller J L, 328; Warstler H L, 394; Waring C H 685; Webb L R, 562, 335; Westover Emily K, 214; Werner J D, 397; Werner W D, 456; White J W, 16, 312; White D, 20, 87, 181; White F C, 26, 34; Whing L L, 30; White H J, 321; Whitney DL,35; Whiting LC,243; Whitman AR,259; White O P, 261; White C W, 282; White W L, 285; White J H, 317, 778; Whiten I B, 583; Willis T C, 222; Wiltse J, 238, 311; Williams G F, 253; Williamson A C, 261; Wilder F N, 261, 330; Willis Maggie, 287; Wise J W, 290; Wilcox L H, 291, 600; Wilcox S K, 398; Wilson J T, 498; Williams A C, 531; Williams & Co M A, 544; Wilson J S, 611; Wickham W A, 540; Wilcox Clara M, 544; Wirth H, 20; Willows A G, 39, 137, 556; Wilkins Mrs M A, 81, 395; Wilkin R, 91; Wilson Mrs W W, 132; Wirt Mrs E, 133; Wilson G W, 135; Willis G T, 143, 582; Wood H K, 94; Woolsey J, 190; Woodruff S A, 212; Woodville A S, 215; Wolfenden J L, 308, 391; Woodruff J V, 609; Wright C H, 140; Wallace J H, 184*; Welty C, 168*; Welty Mary, 168*; Welch L E, 171*; Whiteside Maude, 153*; Whiteside T A, 155*; White Hugh, J, 179, 321; Whitfield Chas, 183; Whitney Nellie G, 185*; Wheatoss Mary E, 186*; Winter J E, 179; Williams M L, 187*; Willis Minnie, 147*; Wisehart Addie, 150*; Williams Gertie A, 154*; Wiltse Albert, 170*; Wirt Fred, 170*; Wirt Mina, 170*; Wier Isabella, 171*; Wier Jessie S, 171*.

York J C, 36; Young Wm, 38; Young C W, 40, 302, 537, 781; Young Willie, 170*; Youngs E L, 144; Yoder S P, 192; York M D, 195; Youngman S J, 303, 325; Young W M, 330, 462; 539, 544.

Zeller Mrs M C, 194; Zimmerman Bess, 176*.

LIST OF ILLUSTRATIONS
IN
Vol. XI. of Gleanings in Bee Culture

Addressing-Machine 703
Apiary, W H Shirley's.....561
Artificial queen-cells 16
American Boy 164
Apiary and Residence of J. Wiltse 238
Apiary, P. L. Viallon's.....436
Atomizer 556
Apiary and House of Geo. E. Hilton...739
Blanton Dr O M 114
Bee Trap, Pouder's 166
Bee-Feeder, The Boy's 263
Boardman H R 437
Bee-boy.....283
Binders, Home-made 62
Buzz-saw, Hand-power, Kingsley's 56
Bee Brush, Cook's 666
Cup and Saucer, Decorated.....143
Candy-Block for Bee-cages.....406
Chaff Hive, Improvement for.....367
Extractor, Kingsley's..... 56
Frames, Home-made 61
Foundation-setter, Easterday's 418
Foundation-setter.....486
Foundation-pump, Smith's.....520
Factory of W F & John Barnes 63
Foundation-mill, New..... 68
Foundation-mill, Gravenhorst's 740
Foundation-Fasten'r for wired frames236
Forncrook's Patent.....614, 615
Frames, Reversible..... 65
Hive-Carrier.....607
Honey-stand 417
Hive-cart, Thompson's.....529
Harpoon 486
Honey-plant, White Sage.....301
Honey-pail, Dadant's 532
Honey-pail, Our 15c-gallon.....149
Honey-board, a queen-excluding..... 10
Honey-House, Plan for..... 7
Honey-Pail, Jones's.....532
Hutchinson, W Z.....59
Goldenrod.....560
Honey-Pitcher.....667
Letter-clip, New.....488
Muth C F,.....307
Milk-pail Honey-pail.....532
Sections, Home-made, One-piece.....709
Sap-spile.....156
Section-frame 710
Section-crate, new, Love's.....720
Sap-pails.....156
Section-crate.....709
Spacing-board.....79
Saw-table with top raised.....237
Saw-table.....237
Shorthand.....282
Sagging of Bottom-bars, To prevent...443
Sections, One-piece.....614
Queen-cells, How to Raise.....327
The Coming Bee.....213
Tongs for holding Frames.....117
Uncapping-Box.....667
White Sage, Cal.....711
Wax-pan.....531
Wheelbarrow..... 406
Wax-Extractor, Solar.....531
Wiring Frames.....248
Wax-Extractor, Jones's Improved.....120
Winter-Feeding.....161
Water-Fountain for bees.....129
Yucca-Brush improved 231

TO YE "BLASTED HOPES" DEPARTMENT.

The bees in convention have met, to decide
On a new course of action, now having tried
All modes but the right one, as plainly appears,
When friend H. and friend F. take poor bee by the ears
To show the dark side of bee culture, and draw
Their own dark conclusions, and lay down the law
For the future; but wisely omit interjections
Of an impious kind in regard to their sections;
While gravely informing poor bee that the masses,
On account of improvements, must as yet eat molasses.
This being the case, we, the bees, would petition
To be heard just for once, in your coming edition,
Without any distinction of age, color or race,
From *Apis dorsata* to the bright, smirking face
Of your homebred Italians, would ask you to pause,
And inquire if God or the bee was the cause
Of last season's failures. But we'll ask of you first,
If things were so bad they might not have been worse;
And if in this year we have just given a living,
Is there not e'en in that a great cause for thanksgiving?
Or are all the rules of your grand moral code
So weak that one failure or so can explode?
And will ye be classed in the ranks of those fools
Who only observe in success life's good rules,—
Who, when all is bright, for more brightness will hope,
But when dark for an hour, cast a new horoscope
Wherein all is dark, nor blooms a flower
Of hope, by life's pathway to brighten the hour
With joy, that is stolen from incoming years,
When all *must* be joy undiminished by tears?
O brothers, arise! nevermore be cast down;
The fruit of the cross, unto all, is the crown;
And still, with the years unto each heart is given
Some sorrow, some woe, that may fit it for heaven.

Let Peace and Hope within thee dwell,
Nor thine be black Despair's alarms,
Till Faith, life's sentry, grounds her arms,
And Death retires with "all is well."

New Orleans, La., Dec., 1883. H. H.

CONCLUDING WORDS.

UNTIL January 1st, we will allow a discount of 3 per cent on all goods advertised in our catalogue, with the exception of foundation.

SOME one of our little juvenile friends away off across the water sent us a bright little letter containing a photograph of a lady riding in a palanquin. We sent the photograph to our engravers, and had a picture made of it, which cost us quite a little sum of money, and now the letter describing it can not be found. If our little friend who wrote it sees this, will she be so kind as to write it over again as soon as she can? It all comes from my bad habit of losing letters. If I do not reform myself in this particular, and some others, I am afraid Uncle Amos himself will get lost some day, and then what will his juvenile friends do?

QUEENS sent by mail and express, since Feb. 19, 1883:

MAIL.	KIND.	EXP
95	Imported	22
145	Select Tested	40
172	Tested	36
2108	Untested	247
212	Hybrid	26
70	Black	....
103	Holy-Land	8
30	Cyprian	3
3	Albino	....
2	Honey	....
2940	Queens sold in all, 3322.	382

WE have just received our 20th gross of Waterbury watches. These are another improvement, called Series C. The appearance is almost exactly the same as B; but many important improvements have been made in the works. So far, they seem to run beautifully. Now, as everybody will want C, we will offer B, until our stock is exhausted, for $3.25. We have still on hand quite a number of A, all regulated and in good order, which we offer for $2.50, until the stock is exhausted. Postage and registering paid at the above prices. They claim a further improvement in the nickel of which the cases are made, on Series C. One thousand Waterbury watches are now manufactured every working day. The Waterbury now contains several valuable features in the way of a pocket timepiece that are not to be found in any other watch to be had at any price.

WAX is shooting up fearfully, and I have just been compelled to pay 34 cts., to get enough to keep our wax-room going to fill orders. Till further notice we will pay 32 cents cash or 34 cents trade. I have gotten into so many scrapes in selling wax — that is, I have so many times sold it for less price than I could buy some more for, that I think I shall not dare offer any for sale now for less than 38 cents. If you want selected wax, 42 cents. Prices of fdn. will be as below, on all orders received after the last mail of the last day of this year:

1 to 25 pounds, per pound	50c
25 to 50 " "	49c
50 to 100 " "	48c

Packed in neat wooden boxes — paper between every two sheets.

If wanted by mail, add 25c per lb. for boxing and postage, on any quantity less than 2 lbs.; over 2 lbs., add 20c for boxing and postage. 12x18 can not be sent safely by mail, in less quantities than a 3-lb. package, and we can not put up less than 1 lb., any size. Now, all of you that will order in our regular-sized sheets, 8x16½, or 12x18, or 8⅝x17⅛, may have it for 1 cent per lb. less. If you will also order it in our regular-sized boxes, of 5, 10, or 25 lbs., you may deduct 1c more per lb. Thus: 1 lb. by mail, regular size will be 73c; 3 lb., $2.01.

By freight or express:

3 lbs. regular sizes will be	$1 44
5 " " " "	2 40
10 " " " "	4 80
25 " " " "	11 75

Very thin drone or worker, 10c per lb. extra.

SHIPPING GOODS WITHOUT SENDING AN INVOICE.

IT seems to me that some of our rural friends need a pretty good talking-to in regard to the importance of making out a bill for goods whenever they send them away to anybody. When we buy goods of factories and city dealers, a billed invoice always comes with the goods, or a day or two before; but when we buy wax, seeds, honey, etc., of our friends in the country, an invoice seems to be the exception, and as a general rule the goods reach us without any trace or clew as to whom they are from, what the price agreed upon was, weight, etc. A box of beeswax of toward 60 lbs. is now here, and has been since last April, and no bill yet, although we have written to the man twice, and once to his postmaster, to make him tell whether he wants cash or trade for his wax. A few days ago a box of lemons and four boxes of oranges came from Florida; and as no invoice has been received, we are obliged to guess at the price we are to sell them for, and this, too, on perishable property. It is true, our friend wrote to us in regard to the price some time ago; but by some means the letter is now not to be found, and we are unable to give him credit, as well as to determine what our goods cost us. Innumerable wrangles and quarrels and lawsuits have resulted from this very fashion among neighbors, of letting goods go off from the premises without having an agreed price put down in black and white; and then after both parties had forgotten, a dispute rose up about it. Now, then, friends, whenever you send any thing off, make a plain bill of it; if any thing is yet to be decided, make the bill all the same, and tell the consignee that if the prices you have given are not right, to reply at once, and you will make it right. If he is negligent, and does not make a reply, he has no business to dispute, with all in black and white. Of course, you keep a copy when you send a bill, and charge it to his account. Some of the friends give as an excuse for doing business in this slipshod way, that they know me, and know I will do what is right. Now, I do not want you to be so friendly as that, dear friends. I want you to charge me all up with every thing you send; and bear in mind, that although my intentions may be good, there is a wonderful chance *here* for mistakes and blunders and misunderstandings. Keep things straight as you go along. If you send me honey, say how many pounds there are, how much the barrel weighs, how much money you want for the honey, and how much for the barrel, and then say deduct for freight, and leave a blank for the deduction. Do the same with beeswax, clover seed, buckwheat, and every thing else you send me. A stalwart friend of mine, who is a railroader, has a favorite way of saying, "Business is business;" and I agree with him, that business *is* business; and when you do business, do it in a business-like way.

RECENT ADDITIONS TO THE COUNTER STORE.

TEN-CENT COUNTER.

5	**INKSTAND**, bronze, with cover; pretty	90	8 00

FIFTEEN-CENT COUNTER.

8	**SCRAP-BOOK**, 24 pages, 9x11; pretty and useful	1 25	11 00
9	**MRS. McGREGOR'S FAMILY NAIL-BOX**	1 25	11 00

THIRTY-FIVE COUNTER.

3	**SUGAR-SHELL**, triple-plated, Roger's Bros' best; new pattern	3 25	30 00
6	**POCKET TOOL-CHEST**, or Tool-Handle with 12 tools inside of it	2 00	28 00

FARM AND BEES FOR SALE!

A farm of 30 acres, situate 9 miles northeast of DesMoines, and ½ mile from Ara Labor Station, on the C. & N. W. R. R.; 10 acres in cultivation, 10 in timber, and 10 in meadow; all under fence. A 1½-story house, containing four rooms, is erected thereon, together with stable and other outbuildings. Bearing orchard on the land. Farm ¼ mile from church and school. Price $1200; $800 cash, and balance in 4 years, with interest at 7 per cent. I have also 50 colonies of bees, in Simplicity hives, now in cellar, which I will sell at $6.00 per colony; also, 11 colonies, in chaff hives, which I will sell at $8 00 per colony. One-third of these bees are Holy-Lands and the balance Italians. Last year I got 5000 lbs. of extracted honey from 25 colonies, and increased to 52; this year I got 6000 lbs. from 38 hives, and increased to 65. All the honey was sold here at home at from 11c. to 15c. I have regular customers here who take all I can produce. DesMoines has 40.000 inhabitants, and is our market for every thing. There is no better location for bees in Iowa than I have got, and no better State in the Union than Iowa for honey. Will sell bees and rent farm for $100 cash, or will sell farm and part of bees, some stock, and other things, if desired.

MILO SMITH,
12½d Greenwood, Polk Co., Iowa.

FRUIT AND HONEY.

20 BLACK TARTARIAN CHERRY-TREES BY Express for $1. *Well packed.* These are from two to four feet. Can send 20 small ones by mail postpaid for $1. CHAS. KINGSLEY,
Greeneville, Greene Co., Tenn.

NUCLEUS COLONY with Italian queen after June 1st for only $3.00. Samples of Business cards, 2c. J. L. HYDE, Pomfret Landing, Conn. 12½tfd.

WANTED.—100 Three Langstroth-Frame Nuclei next spring. Write for particulars.
F. A. SALISBURY, Geddes, Onon. Co., N. Y. 12½tfd

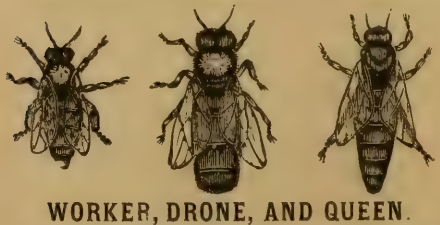
PARTIES with some means who would like to buy out and run an apiary, together with hive manufacturing and bee-keepers' supplies (in connection, if desired, with small fruits and poultry), will do well to correspond with J. L. PEABODY, 376 Wasoola street, Denver, Colorado. 12½d

BEES FOR SALE!

A large lot of Black Bees for sale cheap, all in good condition. Address P. H. KING,
12½d Henderson, Henderson Co., Ky.

I HAVE a few Union Counter Scales with steel bearings, platform and scoop; weigh from ½ oz. to 214 lbs; an accurate and serviceable scale; will send by express, securely boxed, for $3.75 each. Same with double beam, $5.50.
12½tfd. J. A. HOPKINS, South Oxford, N. Y.

ELECTROTYPES.

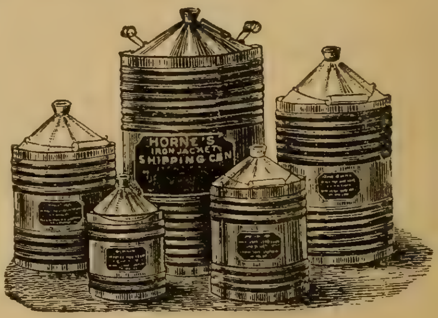


WORKER, DRONE, AND QUEEN.

We can furnish electrotypes of above, all on one block, for the use of those who are getting up circulars, etc., for 40 cts. each. By mail, 3 cts. each extra.

A. I. ROOT, Medina, Ohio.

SHIPPING-CANS For HONEY.



"Iron-Jacket" Honey-Cans.

I presume the friends are aware that ordinary tin cans are not very safe for shipping full of honey, unless boxed or crated. The cans above are ready to be shipped anywhere.

PRICES.

1 Gallon,	$0 25 each.
2 "	.38 "
3 "	.47 "
5 "	.68 "
10 "	1.10 "

By figuring 11 lbs. of honey to the gallon, you can easily see how many pounds each can holds. They are made from tin plates. A sheet-iron casing, with wood bottom, protects them from bruising. The iron jacket is stronger than wood, and far more serviceable. They neither shrink nor swell, and do not split nor fall apart. Every can is tested by steam, and guaranteed to be tight.

A. I. ROOT, Medina, O.

MRS. McGREGOR'S

FAMILY NAIL-BOX

This Box Contains About

700 STEEL WIRE NAILS,

Of Assorted Sizes and Shapes, Suitable for Repairing

Furniture, Brackets, Frames, Toys, Etc.

In fact, a nail for every purpose required in and about a house.

A lady will find in this box a nail to fix a chair, a sofa, a bracket, a moulding, a toy, a picture frame, etc., etc.

A gentleman will find in this box a nail to fix a trunk, a door, a shelf, a fence, a chicken coop, a wheelbarrow, etc., etc.

One of these wire nails used in time will save money.

Every home should have one of these boxes of wire nails.

Price 15 cts. per box; $1.25 for 10, or $11.00 per 100. If wanted by mail, add 10 cts. per box for postage.

A. I. ROOT, Medina, O.

THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, semi-monthly. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan., 1884. Will guarantee safe arrival of every number.

A. I. ROOT, Medina, Ohio.

I WANT to buy 1000 bee-comb cards within 90 days. Will pay good prices. Address
12½d J. B. MURRAY, Ada, Hardin Co., Ohio.